



Guidelines for Health Care in a School Setting

Office of Coordinated School Health

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Periodic review and updates will be scheduled and revision will be made as needed; the first review was held in 2018, during which the name of the document changed to “Guidelines for Health Care in the School Setting.” The professionals that were involved in the reviewing and revising these guidelines have an asterisk in front of their name in the list below.

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Introduction

The Tennessee Department of Education, in collaboration with the Tennessee Department of Health, has developed guidelines to assist Tennessee public school districts and non-public schools with developing policies and procedures to meet the diverse health care needs of students in school settings. The intent of the guidelines is to give direction to public school districts and non-public schools to ensure adherence to state and federal law. The guidelines have been written according to nationally recognized standards established by the National Association of School Nurses and the National Council of State Boards of Nursing and in accordance with the *“Tennessee Nurse Practice Act.”*

The Guidelines for Health Care in a School Setting details the following areas:

- Federal and State Requirements
- Health Care Procedures and Medication Administration
- First Aid Emergencies
- Asthma Management
- Diabetes Management
- Food Allergy and Anaphylaxis Management
- Seizure Management
- Adrenal Insufficiency Management
- Opioid Overdose Indications and Management

To be successful, a coordinated school health program requires collaboration between staff within the school district and community members representing the various components of the coordinated school health model. The guidelines define the roles of school personnel within diabetes, food allergy and anaphylaxis, seizure events, adrenal insufficiency and crisis, and opioid overdose indications and management sections.

Health Assessment and Individual Health Plan

Any child with acute or chronic health issues should have a health assessment completed by a registered nurse in the school or district. As warranted by the child's condition or diagnosis, an Individual Health Plan (IHP) will be completed by the registered nurse and reviewed annually or sooner as needed. An IHP helps to ensure that all necessary information, needs, and plans are considered to maximize the student's participation and performance in school. The IHP also covers other aspects of care such as a student's knowledge about their condition, self-care abilities and any modifications needed to enhance learning and prevent emergencies.

Benefits of an IHP include quality assurance of school nursing services, continuity of care, and development of a safer delegation process of nursing in the school setting.

The National Association of School Nurses (NASN) position statement defines the IHP as a written document based on the nursing process. Development of the IHP by the school nurse provides a framework for meeting these clinical and administrative needs:

- Demonstrates standards of school nursing practice
- Documents the nursing Process
- Provides legal documentation
- Clarifies clinical practice
- Provides administrative information
- Becomes the foundation for health Portion of other educational plans and emergency plans

The student Emergency Plan (Emergency Care Plan or Emergency Action Plan) is developed based on the IHP, is written in clear action steps, and provided to school staff to assist them in responding to a health crisis.

Annual Reporting

T.C.A. § 49-50-1602 requires the departments of education and health to jointly compile an annual report. The report should include data related to the self-administration of medications and health care procedures including the administration of medications to students served in all public and non-public accredited schools in Tennessee.

Each year the department of education will distribute a form, designed by the departments of health and education, to both public and non-public school systems to collect the data and other school health information. This form should be submitted at the end of each school year.

Reports can be found on the office of coordinated school health [website](#).

Federal Requirements

Individuals with Disabilities Education Act (IDEA), Section 504 of the Rehabilitation Act, and the **Americans with Disabilities Act (ADA)** require that each student with disabilities attending public school be able to participate fully in the academic program. Specifically, this means that students must have access to necessary health care during the school day and for school-sponsored activities, even when they occur outside of regular school hours or off school property. These laws require that health services for student health needs be provided if such services are needed for students to access their education.

Family Educational Rights and Privacy Act (FERPA) is a Federal law that protects the privacy of students' education records. "Education records" are broadly defined and include student health records (including immunization records) that are maintained by a school or district. FERPA protects the confidentiality of student health information and specifies when student records may be shared and when it may not. Student health information may only be disclosed under very limited circumstances, such as when disclosure is required by law or when parental permission is obtained.

Occupational Safety and Health Administration (OSHA), a regulatory agency within the U.S. Department of Labor, requires schools to meet safety standards set forth by this agency. These standards include the need for procedures to address possible exposure to bloodborne pathogens. Schools are also required to maintain a clean and healthy environment. They must adhere to universal precautions designed to reduce the risk of

transmission of bloodborne pathogens, which include the use of barriers such as surgical gloves and other protective measures, such as needle disposal, when dealing with blood and other body fluids or tissues.

Health Insurance Portability and Accountability Act (HIPAA) was enacted by Congress in 1996 to, among other things, improve the efficiency and effectiveness of the health care system through the establishment of national standards and requirements for electronic health care transactions and to protect the privacy and security of individually identifiable health information.

The HIPAA Privacy Rule requires covered entities, including health care providers, to protect individuals' health records and other identifiable health information by requiring appropriate safeguards to protect privacy, and setting limits and conditions on the uses and disclosures that may be made of such information without patient authorization. The rule also gives patients' rights over their health information, including rights to examine and obtain a copy of their health records and to request corrections.

State Requirements

1996

Guidelines were initially approved by the Tennessee Board of Nursing and the State Board of Education for implementation during the 1996-97 school year. The guidelines provide information for compliance with Tennessee Code Annotated ("T.C.A.") § 49-50-1602 which requires certain health care procedures, including the administration of medications during the school day or at related events, to be performed by appropriately licensed health care professionals.

2002

T.C.A. § 49-50-1602(b) was amended to allow "...school personnel who volunteer under no duress or pressure and who have been properly trained by a registered nurse" to administer Glucagon in the event of a diabetes emergency in the absence of the school nurse. The guidelines were revised to address this change in law and to provide further clarification for medical and nursing procedures performed in the school setting.

2004

T.C.A. § 49-50-1602 was amended to "permit possession and self-administration of a prescribed, metered dosage asthma-reliever inhaler by any asthmatic student."

T.C.A. § 49-50-1602 was amended to "permit school personnel to volunteer to assist with the care of students with diabetes," excluding the administration of insulin.

T.C.A. § 49-5-414 encourages LEAs to have CPR-certified individuals in their employment or as a volunteer.

T.C.A. § 49-3-359 was amended so that each public school nurse employed or contracted by an LEA will maintain current CPR certification consistent with the guidelines of the American Heart Association.

T.C.A. § 49-6-5004 was amended to authorize health care professionals to indicate the need for a dental, hearing or vision screening on any report or form used in relation to reporting immunization status for a child. Health care professionals shall provide a copy of the report or form to the parents or guardians indicating the need to seek appropriate follow-up.

2008

T.C.A. § 49-50-1602 was amended to allow school staff, who under no duress, to volunteer to be trained in the administration of anti-seizure medication, including diazepam rectal gel as prescribed by a licensed health care provider.

2013

T.C.A. § 49-50-1602 was amended to provide that each school is authorized to maintain at least two epinephrine auto-injectors so that epinephrine may be administered to any student believed to be having a life-threatening allergic or anaphylactic reaction.

2014

T.C.A. § 49-50-1602 was amended to allow "...school personnel who volunteer under no duress or pressure and who have been properly trained by a registered nurse" to administer daily insulin to a student based on the student's individual health plan in the absence of the school nurse. The guidelines were revised to address this change in law and to provide further clarification for medical and nursing procedures performed in the school setting.

2017

T.C.A. § 49-50-1603 was enacted to require each LEA to adopt policies that provide for the administration of medications that treat adrenal insufficiency. The statute requires LEAs to train personnel on the treatment of adrenal insufficiency when notified by a parent or guardian that a student in the school has been diagnosed with adrenal insufficiency.

T.C.A. § 49-50-1604 authorizes LEAs and nonpublic schools to maintain an opioid antagonist at the school and for the school nurse, school resource officer, or other trained school personnel to utilize the opioid antagonists to respond to a drug overdose, under a standing protocol from a physician licensed to practice medicine in all its branches.

School Nursing Roles

This section seeks to differentiate the practice of registered nurses (RNs) from that of licensed practical nurses (LPNs). This information is provided in order to ensure students' health and safety as well as to help superintendents, principals, school staff, and school health personnel understand the differences in the roles of the RN, the LPN, and other individuals in the school setting who are assigned responsibility for health care.

The **school nurse is a professional licensed as a registered nurse by the Tennessee Board of Nursing** as part of the school education team. School nurses manage the school health services in collaboration with their supervising personnel, principal, and superintendent. It is not feasible in many schools to have a school nurse always present; therefore, schools must make use of appropriately trained ancillary personnel to meet students' health-related needs.

The school's administration is responsible for implementing policies and practices to ensure the safety of students. Therefore, it is important to assure that:

- Staff assigned health-related tasks are working within their job descriptions and within their scope of practice,
- Professionals whose practice requires collaboration or supervision by other licensed professionals maintain appropriate collaboration or supervision.
 - This is especially appropriate in the case of the LPN where the Nurse Practice Act **specifically requires supervision by the physician, dentist, or registered nurse** (T.C.A. § 63-7-108).
- Any unlicensed person providing health-related tasks receives appropriate training by a qualified professional.
- The unlicensed individual staff is competent to carry out the assigned task.

The scope of practice for an RN and LPN are not interchangeable, and failure to adhere to scopes of practices expose schools to potential litigation. The RN is the professional nurse in a school setting who may, within the scope of the Nursing Practice Act, triage, assess students, interpret clinical student data, develop nursing care plans, and make decisions regarding student nursing care. An LPN does not meet the professional requirements for licensure as a registered nurse.

Role of the Registered Nurse

- Manage the school health services in compliance with school district policy.
- Function in accordance with the Standards of Professional School Nursing Practice, the Nurse Practice Act, and federal and state statutes that impact school nursing practice.
- Provide information to the school board and school administrators as they develop school health policies and procedures.
- Provide health-related training to school personnel.
- Provide preventive health services to students including health education, screening, consultation, and referrals.
- Provide nursing assessments and nursing diagnoses and develop plans of care for students needing health and nursing interventions.
- Implement interventions within the plan of care directly, through delegation, or through the provision of oversight and coordination to other responsible staff based on consideration of health, safety, and welfare of the student.
- Evaluate the effectiveness of nursing care and modifies the plan of care as needed.
- Coordinate in-school health care with the student's health care provider, the school-based health center, and other providers/staff as necessary and appropriate.
- Determine appropriate delegation of health-related tasks or coordination and oversight:
 - The Nurse Practice Act authorizes RNs to delegate tasks to LPNs.

- Delegation and coordination/oversight of health-related tasks/services must be determined on an individual basis. Factors to be considered for delegation and/or coordination and oversight include safety, acuity of the student, stability of the condition of the student, training and capability of the staff, and nature of the task.
- The registered nurse must exercise professional judgment in determining delegation or coordination/oversight activities.
- Coordination and oversight of licensed healthcare professionals employed or contracted by the LEA. Training should include initial, annual, and periodic review of competencies.
- Coordinate and oversee unlicensed assistive personnel/school personnel volunteer.
 - Identify students' needs and develop/consult on the plan of care.
 - Identify the tasks to be performed by the school personnel volunteer.
 - Provide direction and training to the school personnel volunteer.
 - Determine the ability of the unlicensed staff to perform the task.
 - Monitor the designated staff's reporting and documentation of the task.
 - Ensure that designated staff report directly to the registered nurse for the performance of the task.

Role of the Licensed Practical Nurse and other Medical Personnel

- May assist the registered nurse with specified health tasks.
- May assume health-related responsibilities **only** when those responsibilities **do not** require independent, specialized nursing knowledge, skill, or judgment including assessment and evaluation of student health outcomes and only when those responsibilities have standardized protocols and procedures leading to a predictable outcome.
- Must receive appropriate annual training and demonstrate competency on the specific task to be performed before accepting the task.
- Must work under the direction of a registered nurse in providing school health services.
- Must function within their scope of practice, including medication administration.

Role of the Unlicensed Assistive Personnel (UAP)/School Personnel Who Volunteer

- May assist the registered nurse in carrying out specific tasks that do not require independent, specialized nursing knowledge, skill, or judgment, including assessment and evaluation of student health outcomes and health counseling or teaching. (Examples of appropriate tasks include assistance with vision and hearing screenings and assistance with self-administration of medication.)
- Must receive appropriate training on the specific task to be performed before accepting it.
- Must comply with policies, procedures, and health care plans as directed.
- Must report to and receive oversight from the school nurse (RN) regarding assigned tasks.
- Must carry out assigned tasks as directed and document all tasks.
- Volunteer school personnel may also, with appropriate training, administer emergency medications, such as Diastat® (Diazepam), glucagon, insulin, epinephrine, naloxone, and solu-cortef.

Health Care Procedures and Medication Administration

T.C.A § **49-50-1602(a)(2)** states that health care procedures, including administration of medication to students during the day or at related events, shall be performed by appropriately licensed health care professionals in accordance with applicable guidelines of their respective regulatory boards and in conformity with policies and rules of local boards of education or governing boards of non-public schools. The student's parent or guardian must give permission in writing for appropriately licensed health care professionals to perform health care procedures. The written permission must be kept in the student's school records.

T.C.A. § **49-50-1602(a)(3)** requires that any person assisting with or any LEA/governing board for a non-public school authorizing the self-administration of medication or performing health care procedures (including administration of certain medications), shall not be liable in any court of law for injury resulting from the reasonable and prudent assistance with the self-administration of such medication or the reasonable performance of the health care procedures, if performed pursuant to the policies and guidelines developed by the departments of health and education and approved by applicable regulatory or governing boards or agencies.

Health Care Procedures

The purpose of assisting with or performing health care procedures in school is to help each child maintain an optimal state of health to enhance his or her education. These guidelines do not require schools to assist students with procedures. However, any school that provides such assistance is required to follow these guidelines.

School nursing staff and any other school personnel, including transportation personnel, who perform or assist with procedures that may involve bloodborne pathogens, must receive annual training on blood-borne pathogens and be offered the hepatitis B series of vaccinations if an employee is determined to be at risk for potential exposure. Furthermore, the employer must provide all appropriate personal protective equipment (PPE). Suggested PPE in the school setting includes gloves, face shield, apron/gown, and goggles. A mouth-to-mouth shield should also be available for use by those staff properly trained and certified in its use (i.e., emergency response/CPR/first aid trained employees). Exam quality, non-latex, powder-free gloves must also be available for students or staff with a known or potential sensitivity to latex.

Procedures Performed by Licensed Health Care Professional

T.C.A § **49-50-1602** states that healthcare procedures including administration of medications to students during the school day or at related events be performed by appropriately licensed healthcare professionals in accordance with applicable guidelines of their respective regulatory boards and in conformity with policies and rules of local boards of education or governing boards of nonpublic schools. Procedures should be documented and show compliance with standard nursing guidelines. Documentation should include the name of the procedure, name of the person performing the procedure, date, time, results of the procedure or the reason the procedure was omitted. The student's parent or guardian must give permission in writing for appropriately licensed health care professionals to

perform health care procedures and administer medications. The written permission must be kept in the student's school records.

There are certain health care procedures that may be unsafe to delegate to unlicensed assistive personnel. Urinary catheterizations and tube feedings are two such procedures. The Tennessee Nurse Practice Act regulates this type of nursing care for both the RN and LPN. Although nurses can legally perform certain healthcare procedures, the nurse in the school setting may be unfamiliar with evolving healthcare technology, interventions, treatments, and equipment (i.e., updated insulin pumps). These changes can also impact the nurse's responsibilities. Specific orientation or training regarding a procedure or equipment may be required.

At the beginning of the school year and periodically as needed, an LEA should determine the types of healthcare procedures that may be performed in their schools. With those specific procedures in mind, an initial, annual and periodic review of the skills competency evaluation should be performed by the licensed healthcare professional employed or contracted by the LEA. The evaluation should be maintained by the school nurse (RN) or principal.

- Suggested training resource for health care procedures: Wisconsin Improving School Health Services Project (WISHeS):
 - A collaborative project between the Wisconsin Public Health Association and the Medical College of Wisconsin aimed at improving school health services (www.wishesproject.org). The tool lists health care procedures for the urinary, respiratory, digestive, endocrine and cardiovascular systems that could be performed in a school setting. Each procedure (i.e., ostomy care) lists considerations, supplies, resources, reference, and detailed step-by-step instructions.

Procedures Performed by Students without Assistance

If a student has been taught to perform his/her own procedure and does not need assistance, space must be made available for the student to perform the procedure. If a student is performing an invasive procedure, that student should have a minimal bi-annual nursing assessment of competency and proficiency as well as an IHP. Physician's orders and parental authorization are highly recommended but are not required for procedures done by a student without assistance. It is not the intent to make a child or adolescent feel the school system or school nurse (RN) is attempting to remove personal choice or ability to manage medications or procedures. Every attempt should be made on an individual basis to allow a child who is independent to continue self-management. It is prudent for the student and the nurse to work out a method of reporting or asking for assistance on an as-needed basis.

Procedures Performed by Students with Assistance from the Unlicensed Assistive Personnel

An IHP for procedures must include a nursing assessment, physician's orders, and parental authorization. The nursing assessment will determine whether or not unlicensed assistive personnel (UAP) can assist the student with a procedure. Appropriate training and demonstration of competency on the specific task must be performed prior to providing assistance. Once trained to provide a specialized health service for one student, he/she cannot perform that same service for another student without receiving delegated authority and training from the school nurse (RN).

Activities of Daily Living

Those activities that are commonly deemed to be activities of daily living (ADL) do not need to be performed by a licensed healthcare professional. Activities that can be performed by unlicensed assistive personnel or a teaching assistant may include but are not limited to:

- Toileting
- Bathing
- Diapering
- Dressing
- Vital Signs
- Transferring
- Positioning
- Application of protective and supportive devices
- Removal of protective and supportive devices
- Record taking
- Feeding

In general, nursing assessment, physician's orders, and parental authorization are not needed for ADLs, although some of the listed items may require a check off competency evaluation by a registered nurse or therapist.

Administration of Medication

The purpose of administering medications in school is to help each child maintain an optimal state of health to enhance his or her education. Medications should be limited to those required during school hours and necessary to provide the student access to the educational program. The intent of the guidelines is to reduce the number of medications given in school, yet assure the safe administration of medications for those students who require them. The guidelines do not require schools to assist students with self-administration of medications or procedures. However, any school that provides such assistance is required to follow these guidelines:

- Work with the licensed prescriber and the parent(s) or guardian to adjust medication administration time so that administration is not needed during the school hours.
- Hire a registered nurse or contract with a local community agency, (e.g., local health department, home health agency, or local hospital, for a registered nurse to come into the school and administer medications).
- Allow a parent, guardian, or parental adult designee, per local school system policy and as determined by IHP, 504 Plan, IEP or another education plan, to come to the school to administer medication to their child.

LEAs are encouraged to have certain products on hand, such as eyewash, for first aid purposes. If such products are kept, they, along with any student medications, should be monitored and stored under proper temperatures according to pharmacy or manufacturer guidance in order to maintain efficacy. If it is discovered that storage temperatures fell, at any time, outside of the manufacturer's recommendations for more than a few hours, the products should be discarded and not used for students.

For all **prescription and non-prescription medications**, a written request shall be obtained from the parent or guardian requesting that medication is given during school hours. It is the parent's or guardian's responsibility to ensure that the written request and medication are brought to the school. The written request must state that the child is competent to self-administer the medication with assistance.

Local school board policies related to “Zero Tolerance” may require that a responsible adult bring all medications, both prescription and non-prescription, to school and deliver the medication to appropriate or designated school personnel.

All Prescription Medications

(Including CAMs – Complementary and Alternative medicines, if LEA permits) given at school shall:

- Be prescribed by a licensed prescriber on an individual basis as determined by the child’s health status.
- Be brought to school in the original pharmacy labeled container. The container shall display:
 - Child’s name
 - Prescription number
 - Medication name and dosage
 - Administration route or other directions
 - Date
 - Licensed prescriber’s name
 - Pharmacy name, address, and phone number
- Require a written parental/guardian request (renewed annually) that shall be kept in the student’s records and include:
 - Child’s name
 - Name and address of parent/guardian
 - Name of medication, dose, route, time of administration
 - Discontinuation date
 - Reason medication is needed
 - Parent/guardian current phone number in case of emergency
- Have each dose of medication documented and the documentation easily retrievable. Documentation shall include:
 - Date
 - Frequency
 - Time
 - Dosage
 - Rate
 - Signature of the person administering or assisting the student in self-administration
- Have written authorization from the licensed prescriber and parent when there are changes in the prescription medication. The change will be noted on the medication administration record (MAR) without obliterating the previous information. Only an RN or LPN can make changes on the MAR. Changes can include, but are not limited to:
 - Time
 - Dose
 - Addition
 - Discontinuation

All Non-Prescription Medications

(Excluding CAMs) given in school shall:

- Be brought in with the original label listing the ingredients, dose schedule, and child's name affixed to the container.
- Require a written parental/guardian request which shall be kept in the student's school records and include:
 - Child's name
 - Name and address of parent/guardian
 - Name of medication, dose, route, time of administration
 - Discontinuation date
 - Reason medication is needed
 - Parent/guardian's current phone number in case of emergency

Storage

All individual students' medications, except those exempted by law, must be put in a leak-proof container and stored in a secure or locked area. Each medication should be stored in the original pharmacy or manufacturer labeled container with the student's name on it. Medications must be kept no longer than the expiration date or end of the school year, whichever is sooner. Access to stored medication and medication cabinet keys must be limited to school personnel authorized to administer medications. It is recommended that if a medication requires refrigeration, it be stored under proper temperatures according to the pharmacy or manufacturer guidance and in a locked refrigerator or in a locked container in a refrigerator specifically for medications. It is also recommended to keep a certified, calibrated thermometer in the refrigerator. If at any time it is suspected or discovered that storage temperatures fell outside the manufacturer's recommendations for more than a few hours, the products should be discarded and not used for students.

Emergency medications such as the Glucagon kit and the Epinephrine kit must be kept in a secure area near the student and readily available for timely, emergency use. The student's IHP will determine availability and parameters for use of emergency medications.

Administration

Certain guiding principles are mandatory when dealing with medication administration, the most important of which is being sure to follow the five "R's" of administration. These simple but important guidelines help assure that the correct person is given the intended medication in the prescribed amount at the correct time and in the proper way. Ensuring medication safety requires that healthcare providers identify and confirm the following facts prior to administering any medication and/or treatment:

- | | |
|----------------------------|----------------------------------|
| 1. Right patient (student) | 4. Right time |
| 2. Right drug or treatment | 5. Right route of administration |
| 3. Right dose | |

As with any other medication, Schedule II controlled substances (e.g., Ritalin™) should be stored in a secure or locked area and inventoried upon receipt by the person routinely administering it. When administered, each dosage of medication shall be documented. If at the end of the medication regimen a county discrepancy is noted, it should be reported to the school nurse to enable further investigation.

Self-Administration of Medication

The provisions of T.C.A. § **49-50-1602(a)** state that a local board of education or governing board for a non-public school may permit an employee or a person under contract with the board to assist in self-administration of medications, under the following conditions:

- The student must be competent to self-administer non-prescription or prescription medication with assistance;
 - The student's condition, for which the medication is authorized or prescribed, must be stable;
 - The self-administration of the medication must be properly documented;
 - Guidelines, not inconsistent with this section, for the assistance in self-administration of nonprescription or prescription medications by personnel in the school setting, developed by the Departments of Health and Education and approved by the board of nursing, must be followed;
 - The student's parent or guardian must give permission in writing for school personnel to assist with self-administration of medications. The written permission shall be kept in the student's school records; and
 - Assistance with self-administration shall primarily include storage and timely distribution of medication.

All training of school personnel providing assistance with self-administration of medications shall be done by a registered nurse employed or contracted by the local school system. Training for school personnel in the assistance with self-administration of medications shall be repeated annually, and competencies shall be documented in the employee personnel file. It is strongly recommended that backup personnel be trained for each school site.

T.C.A § **49-50-1602(a)(3)** requires that any person assisting in self-administration of medication or performing health care procedures, including administration of medications under this section, and any local board of education or governing board for a nonpublic school authorizing the self-administration of medications or the performance of health care procedures shall not be liable in any court of law for injury resulting from the reasonable and prudent assistance in the self-administration of such medication or the reasonable performance of the health care procedures, including administration of medications, if performed pursuant to the policies and guidelines developed by the departments of health and education and approved by applicable regulatory or governing boards or agencies.

Guidelines for Assistance with Self-Administration of Medication

Medications should be limited to those required during school hours and necessary to maintain the student's enrollment and attendance in school.

The student should be able to identify his or her medication, identify the reason the medication is used, and be competent to self-administer the authorized and/or prescribed medication with assistance.

The individual assisting with medication of self-administration must visually observe the student self-administer the medication **OR** in the case of a cognitively competent but physically challenged student, perform that portion of self-administration for which the student is physically incapable.

Each dosage of medication shall be documented and the documentation easily retrievable. Documentation shall include date, frequency, time, dosage, route and the signature of the person assisting the student in self-administration.

In the event a dosage is not administered as ordered (e.g., missed dose) or any other medication error occurs, a Medication Error Form must be filled out and routed to the appropriate administrative personnel in the local school system or routed per the protocol of a contracted agency. The school nurse (RN) and parent/guardian must be notified in the event of a medication error.

A procedure shall be established for providing communication with the parent(s) or guardian regarding any problems with the administration of the medication.

To assure safety and accountability, nursing supervision shall be provided to personnel assisting with the self-administration of medication to ensure local school board policies and state guidelines are being followed.

Discarding

The parent or guardian shall be responsible at the end of the treatment regimen for removing any unused medication from the school. When the duration of medication is complete or the medication is out of date, the parent/guardian shall be advised to pick up the medication. After notification attempts per local school system policy, if not picked up in 14 days, the medication shall be destroyed per local environmental protocol by the school nurse (RN) or school administrator, documented and witnessed by at least one other school staff person.

Asthma-Reliever Inhaler

T.C.A. § 49-50-1602(c) states that an LEA **must** permit possession and self-administration of a prescribed, metered dosage, asthma-reliever inhaler by any student with asthma if the student's parent or guardian:

- Provides to the school written authorization for student possession and self-administration and provides a written statement from the prescribing health care practitioner that the student is diagnosed with asthma and has been instructed in self-administration of the prescribed, metered dosage, asthma-reliever inhaler. The statement must also contain the following information:
 - The name and purpose of the medication
 - The prescribed dosage
 - The time or times the prescribed inhaler is to be regularly administered, as well as any additional special circumstances under which the inhaler is to be administered
 - The length of time for which the inhaler is prescribed

These statements shall be kept on file in the office of the school nurse (RN) or school administrator.

The LEA shall inform the student's parent or guardian that the school and its employees and agents shall incur no liability as a result of any injury sustained by the student or any other person from the possession of self-administration of the inhaler.

The student's parent or guardian shall sign a statement acknowledging that the school shall incur no liability and the parent or guardian shall indemnify and hold harmless the school and its employees against any claims relating to the possession or self-administration of the inhaler.

The permission for self-administration of the prescribed, metered dosage, asthma-reliever inhaler shall be effective for the school year in which it is granted and must be renewed each following school year upon fulfilling the requirements set forth in these guidelines.

The LEA may suspend or revoke the student's possession and self-administration privileges if the student misuses the inhaler or makes the inhaler available for usage by another person.

Upon fulfilling the requirements set forth in these guidelines, a student with asthma may possess and use the prescribed, metered dose, asthma-reliever inhaler when at school, at a school-sponsored activity, or before or after normal school activities while on school property, including school-sponsored child care or before or after school programs.

Students with asthma must have an Individual Health Plan (IHP) developed by the school nurse (RN). The IHP can serve as the Asthma Action Plan. There should be a mechanism to include self-reporting of reliever inhaler use and frequency that can be documented on the student MAR and included in the annual report. A sample action plan is available at the [American Lung Association](#).

First Aid Emergencies

T.C.A. § **49-5-414** states that every public elementary and secondary school in this state is encouraged to have in its employ, or as a volunteer, at least one (1), preferably more, persons who are currently certified by the American Red Cross or another qualified certifying agency approved by the department of education, as qualified to administer emergency first aid and cardiopulmonary resuscitation (CPR).

The local board of education is authorized to allocate up to six and one half (6.5) hours a year of in-service days established pursuant to T.C.A. § 49-6-3004 to conduct training programs for teachers and other personnel who have expressed an interest in becoming qualified to administer emergency first aid and CPR.

In addition, T.C.A. § **49-3-359** states that each public school nurse employed by an LEA shall maintain current certification through a certifying CPR course consistent with the scientific guidelines of the American Heart Association in collaboration with the International Liaison Committee on Resuscitation.

The following conditions may require first aid and/or immediate emergency care provided by a school staff person. Examples of conditions and school staff interventions may include but are not limited to:

- Seizures: vagal nerve stimulator magnet, emergency seizure protocol
- Respiratory distress: asthma reliever inhaler, assisted nebulizer treatment, rescue breathing
- Bleeding: pressure to the site, elevation, and shock prevention
- Choking: Heimlich maneuver
- Fainting: protect from injury, elevated feet
- Heat/cold emergency: application of a blanket, ice pack
- Major Trauma: activate EMS, airway management
- Hypoglycemic emergency: Glucagon injection if training completed
- Cardiac arrest: CPR, activate EMS
- Allergic reaction: epinephrine auto-injector if training completed

School personnel must respond appropriately to any emergency situation. Children with known health problems or certain diagnoses should have an Individual Health Plan (IHP) that includes emergency care procedures, a nursing assessment, physician's orders, and parental authorization. In addition, it is recommended that the school protocol include parental or guardian notification, school nurse (RN) notification, and activation of EMS as appropriate for any emergency situation.

Exemptions by Law: Emergency Procedures by Trained Personnel

Tennessee law permits certain emergency procedures to be performed by school personnel with appropriate training. Those laws include:

- **Diazepam Gel:** T.C.A. § **49-50-1602** provides that “. . . school personnel who volunteer under no duress or pressure and who have been properly trained by a registered nurse employed or contracted by the LEA or governing board for a non-public school may administer anti-seizure medications, including diazepam gel, to a student in an emergency situation. . .” The Departments of Health and Education shall jointly amend guidelines to reflect the appropriate procedures for use by registered nurses in training volunteer school personnel to administer anti-seizure medications to a student in an emergency situation. The guidelines shall require at least one school employee to serve as a witness when a volunteer administers anti-seizure medication during an emergency situation, unless a witness is not available within the time limit for administration specified in the emergency care plan. Training to administer anti-seizure medication shall be repeated annually. Training is outlined in the Seizure section of these guidelines.
- **Epinephrine:** T.C.A. § **68-140-310** allows any lay person eighteen (18) years and older who has been trained to administer epinephrine in emergency situations, and T.C.A. § **49-50-1602** authorizes schools to maintain epinephrine auto-injectors in a secure, unlocked location and authorizes trained school personnel to administer epinephrine to any student believed to be having a life-threatening allergic or anaphylactic reaction. The statute authorizes a physician to prescribe epinephrine auto-injectors in the name of an LEA or non-public school for such use. Training is outlined in the Food Allergy and Anaphylaxis section of these guidelines.
- **Glucagon:** T.C.A. § **49-50-1602** provides that “...school personnel who volunteer under no duress or pressure and who have been properly trained by a registered nurse employed or contracted by the local education agency may administer Glucagon in emergency situations” Training to administer Glucagon shall be repeated annually and competencies shall be documented in the employee's personnel file. The statute does not require school systems to have volunteer school staff trained to administer Glucagon. This is a choice each school

system will make based on their needs and the availability of school staff who volunteer. Training is outlined in the Diabetes section of these guidelines.

- **Naloxone:** T.C.A. § **49-50-1604** provides for guidelines regarding the availability of opioid antagonists in schools. The statute requires the State Board of Education, in consultation with the state department of health, to develop guidelines for the management of students presenting with a drug overdose for which administration of an opioid antagonist may be appropriate. Each school is authorized to maintain an opioid antagonist at the school in at least two unlocked, secure locations, so that an opioid antagonist may be administered to any student believed to be having a drug overdose. Physicians may prescribe an opioid antagonist in the name of an LEA or nonpublic school to be maintained for use in schools when necessary. An LEA may utilize a statewide collaborative pharmacy practice agreement to obtain an opioid antagonist for administration. The school nurse, school resource officer, or other trained school personnel may utilize the supply of the opioid antagonists to respond to a drug overdose. If a student is injured or harmed due to the administration of an opioid antagonist, the physician is immune from liability unless there was an intentional disregard for safety. Similarly, if a student is injured or harmed due to the administration of an opioid antagonist to the student by school personnel, the employee is not liable for the injury unless the personnel administered the opioid antagonist with intentional disregard for safety.

Guidelines for the Administration of an Opioid Antagonist

Opioids are substances derived from the opium poppy (State Board of Education Policy 4.205). Examples of opioids include illegal drugs such as heroin and prescription medications used to treat pain, such as oxycodone and methadone. Opioids bind to specific sites in the brain that affect breathing. Due to their effect on the brain, an opioid overdose can cause a person to stop breathing and can result in death.

- Signs of an overdose include:
 - Unresponsiveness to shouting or pain;
 - Unconsciousness;
 - Slow and shallow breathing or not breathing;
 - Pale, clammy skin or loss of color;
 - Blue, purple or gray face, especially around lips and fingernails;
 - Faint or no pulse; and/or
 - Extremely small “pinpoint” pupils.
- Naloxone and Indications for Use
 - An opioid antagonist is used when there is suspicion of an opioid overdose.
 - Displaces the opioid from the receptors in the brain to reverse the overdose.
 - Minimal side effects.
 - If administered to someone who is not suffering from an opioid overdose, it is not harmful.
 - Available as an auto-injector or an intranasal spray. Each LEA may decide which form of naloxone will be kept in schools.
- Training Requirements

- School nurses and other employees expected to provide emergency care to students must complete the Tennessee Department of Health training on Naloxone administration.
- A certificate is provided upon completion of the training.
- Location and Storage of Naloxone
 - Each school within an LEA and each nonpublic school is authorized to maintain Naloxone in at least two unlocked, secure locations to be determined by each school.
 - Should be stored according to the manufacturer's instructions.
 - Each LEA should develop a procedure for maintaining an inventory documenting the quantities, locations, and expirations of Naloxone, proper storage, and documentation of replacement units.
- What to do during an overdose
 - In the case of a suspected opioid overdose, school nurses or other trained staff shall follow the protocols outlined in the Naloxone training and the instructions in the Naloxone kit. It is recommended that each LEA develop a procedure for use of naloxone that includes, but is not limited to, the following steps:
 - Step 1: Try to maintain responsiveness.
 1. Call the person's name.
 2. Shake the person.
 3. Utilize sternal rub (make a fist and rub knuckles over a person's sternum).
 - Step 2: Dial 911 and begin CPR.
 1. If an individual is not responsive, alert someone to call 911 and get an AED.
 2. If an individual is not breathing, begin CPR per training.
 - Step 3: Administer a Naloxone product per package insert instructions. When administering intranasal Naloxone (Brand name: Narcan™):
 1. Lay the person on his or her back.
 2. Remove the spray from the box.
 3. Peel back the tab with the circle to open.
 4. Hold the spray with your thumb over the bottom of the plunger and your first and middle fingers on either side of the nozzle.
 5. Tilt the person's head back and provide support under the neck with your other hand.
 6. Gently insert the tip of the nozzle into one nostril until your fingers on the nozzle are against the bottom of the person's nose.
 7. Press the plunger firmly to deliver the dose.
 8. Remove spray nozzle out of the nostril after the dose is given.
 9. If the person's symptoms return after the initial dose of Naloxone, an additional dose may be given after 2-3 minutes. If another dose needs to be given, a new nasal spray must be used.
 - ❖ When administering Naloxone auto-injector (Brand name: Evzio®): Evzio® is an auto-injector that gives voice instructions for each of the steps. A practice or "trainer" device is included. As part of the preparation for opioid overdose, practice using the Trainer for EVZIO®.
 1. Pull Evzio® from the outer case.

2. Pull off the red safety guard. Pull firmly (the red safety guard is made to fit securely). Do not replace the red safety card after it is removed. To reduce the chance of accidental injection, do not touch the black base of the auto-injector, which is where the needle comes out. If an accidental injection happens, get medical help right away.
 3. Place the black end of the product on the outer thigh. In children under one year of age, the person giving Evzio® should pinch the thigh muscle while administering the dose. Evzio® can be given through clothing.
 4. A distinct “click and hiss” sound will be heard. This is normal and means that it is working correctly.
 5. Keep firmly pressed on the thigh for five seconds after you hear the click and hiss sound. The needle will inject and then retract back into the auto-injector and is not visible after use.
 6. After use, place the auto-injector back into its outer case. The black base will lock into place. The voice instruction system will state that Evzio has been used and the LED will blink red. The red safety guard cannot be replaced. The viewing window will no longer be clear. You will see a red indicator.
 7. If the person’s symptoms return after the first dose of Naloxone, an additional dose may be given after 2 to 3 minutes. If another dose needs to be given, a new auto-injector must be used.
- Step 4: Post-Naloxone Administration Support
 1. Check for breathing. If the person is not breathing, continue to perform CPR until Naloxone starts working or EMS arrives.
 2. If the person is breathing, place the person on his or her side. This position will help prevent the individual from inhaling vomit.
 - Step 5: Stay and Watch the Individual
 1. Explain to the individual that you’ve just given them Naloxone.
 2. Comfort the person being treated, especially since withdrawal symptoms triggered by Naloxone can be unpleasant.
 3. Help the person remain calm.
 - Step 6: Inform Paramedics
 1. Inform EMS personnel about the treatment given and condition of the individual.
- Records and Reporting
 - It is recommended that each LEA develop a Naloxone receipt form with storage information as well as a use reporting form which should be completed after any incident involving the use of Naloxone.

SOLU-CORTEF

T.C.A. § **49-50-1603** provides for the administration of medicine that treats adrenal insufficiency. Requires each LEA to adopt policies that provide for the administration of medications that treat adrenal insufficiency and crisis.

- Adrenal Insufficiency
 - Chronic condition
 - Adrenal glands fail to produce specific stress hormones
 - Daily medication required

- Adrenal Crisis
 - A sudden, severe worsening of symptoms associated with a student diagnosed with adrenal insufficiency, such as severe pain in the lower back, abdomen or legs, vomiting, diarrhea, dehydration, low blood pressure or loss of consciousness
 - Medical emergency, call 911

Training Requirements:

- Requires training on the treatment of adrenal insufficiency to be provided to school personnel so that medication may be administered to students when notified by a parent or guardian that their student in the school has been diagnosed with adrenal insufficiency.
- Must be conducted or delegated by a Physician or Nurse Practitioner.
- Persons who have been trained may possess and administer medication to students for whom the medication is prescribed if the student is suffering an adrenal crisis in an emergency situation and a licensed healthcare professional is not immediately available.

Supplies Needed:

- Hydrocortisone vial
- Alcohol swab
- 2 mL syringe
- A needle to draw the medication up in and a needle to administer the injection
- Cotton swab

Preparation:

1. Wash your hands before preparing the injection.
2. Read the label to ensure you have Solu-Cortef.
3. Check the expiration date.
4. Press firmly down on the yellow top to force the diluent into the lower chamber.
5. Gently mix the solution without shaking it.
6. Turn the vial upside down a number of times.
7. Do NOT shake the vial.
8. The solution is initially cloudy but then clears.
9. Remove the plastic tab covering the rubber stopper.
10. Wipe the top of the vial with an alcohol swab.
11. Connect the 2mL syringe and the vial access cannula/drawing-up needle firmly together.

12. Place the vial on a firm surface and insert the access cannula/drawing-up needle through the rubber stopper.
13. With the access cannula/drawing-up needle in the vial, invert the bottle and withdraw the correct dose.
14. If using a "drawing-up" needle, keep the needle tip below the fluid level.
15. Change to the injection needle.
16. Use the needle size recommended by your clinic nurse.
17. Flick out any air bubbles and expel any excess air.
18. Clean the skin surface with an alcohol swab.
19. Holding the syringe firmly, give the injection by quickly inserting the needle fully through the skin surface on the outer thigh into the muscle layer.
20. Push the plunger until the dose is fully injected. This will only take about 10 seconds.
21. Remove the needle and place in a sharps container.
22. Press the cotton swab firmly over the site for a few seconds.
23. The injection will work quite quickly but supervision is still required.

After Administration:

- If 911 was not called prior to administration, call now.
- Do NOT leave the student unattended.
- Turn the student on his/her side and monitor breathing.
- Ensure that parent/guardian has been notified.
- Document your actions!
 - What time did you notice symptoms?
 - What was the time that you administered the medication?
 - What time was 911 called and what time did EMS arrive?
 - What time did EMS take the student from school?
 - What actions were done to care for the student in an adrenal crisis? (Ensure that each person documents their own actions/steps taken in caring for the student – Do NOT document for another person.)

Liability:

Employees administering the medication or performing health care procedures related to the administration of medication for adrenal insufficiency and the board of education authorizing the administration of the medication or the performance of healthcare procedures are not liable for injury resulting from the administration of the medication or performance of the healthcare procedures.

- Do NOT delay or second guess whether the child is in crisis – when in doubt, provide the medication as directed according to the student's emergency medical management plan.

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Diabetes

T.C.A. § **49-50-1602**(d)(3) states that all school nurses must be educated in diabetes care and have knowledge of the guidelines. School personnel, who volunteer under no duress to assist with the care of students with diabetes, must receive training pursuant to the guidelines from a school RN. The school RN may use certified diabetes educators and licensed nutritionists to assist with the training. All training must be renewed on an annual basis and competency must be noted in the personnel file. School personnel shall not be required to volunteer for the training. School personnel may not be reprimanded, subject to any adverse employment action, or punished in any manner for refusing to volunteer.

Per T.C.A. § **49-50-1602**(d)(7): Upon written request of the parent or guardian, and if included in the student's medical management plan and in the Individual Health Plan (IHP), a student with diabetes shall be permitted to perform blood glucose checks, administer insulin, treat hypoglycemia and hyperglycemia and otherwise attend to the care and management of the student's diabetes in any area of the school or school grounds and at any school-related activity, and shall be permitted to possess on the student's person at all times all necessary diabetes monitoring and treatment supplies, including sharps. Any sharps involved in diabetes care and management for a student shall be stored in a secure but accessible location, including on the student's person, until use of the sharps is appropriate. Use and disposal of sharps shall be in compliance with the guidelines set forth by the Tennessee Occupational Safety and Health Administration (TOSHA).

Diabetes is considered a disability under federal law. Under Section 504 of the Rehabilitation Act of 1973, it is illegal to discriminate against a person with a disability. Children with diabetes must have full access to all activities, services, or benefits provided by public schools. An LEA shall not assign a student with diabetes to a school other than the school for which the student is zoned or would otherwise regularly attend because the student has diabetes.

The following persons shall not be liable in any court of law for injury resulting from reasonable assistance with the care of students with diabetes if performed pursuant to these guidelines:

- Any school nurse (RN) who provides the training.
- Any person who is trained and whose competency is indicated in such person's personnel file.
- Any local board of education or governing board for a non-public school that authorized school personnel to volunteer to assist with the care of students with diabetes.

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Student Health Plans and Care Plans - Diabetes

It is recommended that the school nurse (RN) develop an Individualized Health Plan (IHP) in collaboration with the student, parent/guardian, student's health care provider, and other school staff that need to know or may care for the student during the school day. The student's IHP should include, as applicable, information from the **Diabetes Medical Management Plan (DMMP)**,

Diabetes Emergency Care Plans, 504 Plans and Individualized Education Plan (IEP), as well as documents such as plans for events outside the usual school day and protocols for the appropriate disposal of materials that come in contact with blood. The RN will need to use the nursing process in the development of the plan. The nursing process uses 6 sequential steps that are: assessment, diagnosis, plan, implement, and evaluate. The plan will define who does what and what will be done to ensure the safety of the student. Plan information should be reviewed and updated each school year or upon a change in the student's prescribed regimen, level of self-management, school circumstances (e.g., a change in schedule) or at the request of the student or parents/guardian. Use of the following information is essential in the development of a student's IHP:

- Date of diagnosis
- Current health status
- Emergency contact information
- Student's willingness and ability to perform self-management tasks at school
- List of diabetes equipment and supplies, including the use of insulin pump and/or continuous glucose monitoring devices
- Specific medical orders
- Blood glucose monitoring
- Insulin, glucagon, and other medications to be given at school
- Meal and snack plan
- Exercise requirements
- Additional monitoring
- Typical signs, symptoms, and prescribed treatment for hypoglycemia
- Typical signs, symptoms, and prescribed treatment for hyperglycemia

The **DMMP** is completed by the student's parents/guardians and the health care provider and is the medical basis for an IHP. It generally includes how to recognize and treat hypoglycemia and hyperglycemia as well as specific orders for blood glucose monitoring, administration of insulin and the steps to take in an emergency.

The **emergency plan of care** of hypoglycemia and hyperglycemia, based on the DMMP, summarizes how to recognize and treat hypoglycemia and hyperglycemia and who to contact for help. The school nurse (RN) will coordinate the development of these plans. An emergency plan of care should be completed for each student with diabetes and should be copied and distributed to all school personnel who have responsibility for students with diabetes during the school day and during school-sponsored activities.

Consider laminating these plans for use throughout the school year. Provide completed copies to the parents/guardians as well. An emergency plan of care includes:

- Emergency contact information for parents/guardians and health care provider.

- Causes of hypoglycemia and hyperglycemia.
- Symptoms of hypoglycemia and hyperglycemia.
- Actions for treating hypoglycemia and hyperglycemia.

During all levels of training, information in the emergency plans on the sign and symptoms of hypoglycemia and hyperglycemia, how to respond, and who to contact for help in an emergency should be reviewed with school personnel.

Diabetes Description

Diabetes is a chronic disease in which the body does not make or properly use insulin, a hormone that is needed to convert sugar, starches, and other food into energy by moving glucose from blood into the cells. Insulin lowers blood glucose. People with diabetes have increased blood glucose (sugar) levels for one or more of the following three reasons:

1. Little or no insulin is being produced,
2. Insulin production is insufficient, and/or
3. The body is resistant to the effects of insulin.

As a result, high levels of glucose build up in the blood, and spill into the urine and out of the body. The body loses its main source of fuel and cells are deprived of glucose, a needed source of energy. High blood glucose levels may result in short and long term complications over time.

Type 1 diabetes is usually diagnosed in children and young adults. In type 1 diabetes, the body does not produce insulin. Type 2 diabetes is the most common form of diabetes in the U.S. population. In type 2 diabetes, the body does not use insulin properly.

According to the National Diabetes Education Program, diabetes is one of the most common chronic diseases in school-aged children affecting about 208,000 young people in the United States. Most children with diabetes have Type 1 diabetes.

Diabetes is not contagious and cannot, at this time, be cured. However, it can be managed and treated. Treatment of type 1 diabetes consists of administering multiple doses of insulin, monitoring blood sugar several times during the day, eating nutritious meals and snacks, as well as following a regular exercise program. A balance between insulin, food, and exercise must be maintained to prevent blood sugar levels from being either too low (hypoglycemia) or too high (hyperglycemia).

Diabetes must be managed 24 hours a day, seven days a week. For students with Type 1 diabetes, and for some with Type 2 diabetes, that means careful monitoring of their blood glucose levels either by finger stick or with a catheter worn under the skin sensing glucose levels, which can be sent to a device and shared to smartphones throughout the school day and administering multiple doses of insulin by injection or with an insulin pump to control their blood glucose and minimize complications. Blood sugar monitoring, careful attention to a healthy diet and daily exercise are important to controlling Type 2 diabetes. Many students with type 2 diabetes will take oral medication, metformin, and some will also need to take insulin injections.

Signs and Symptoms of Hypoglycemia/Hyperglycemia

1. Causes of Hypoglycemia:

- Too much insulin
- Late food or too little food
- Too much or too intense exercise
- A planned or unplanned activity without additional food

The recognition and treatment of **hypoglycemia** are vitally important. Mild **hypoglycemia** can usually be treated easily and effectively. Most episodes of hypoglycemia that will occur in the school setting are of the “mild” type. Symptoms of **hypoglycemia** may include the following:

- Extreme hunger
- Shakiness
- Tremors
- Dizziness
- Lethargy
- Headache
- Pallor
- Anxiety
- Increased heart rate/palpitations
- Dilated pupils
- Clammy skin
- Sweating
- Changed personality

If not treated promptly, a moderate **hypoglycemia** reaction can quickly progress to a severe state or condition which may be characterized by:

- Irritability/frustration
- Behavior/personality changes
- Extreme tiredness/fatigue
- Sudden crying
- Restlessness
- Confusion
- Inability to swallow
- Dazed appearance
- Seizures/convulsions
- Unconsciousness/coma

Remember, onset and progression can happen very quickly. Each student will have his/her own set of symptoms that characterize hypoglycemia. These should be listed in the DMMP. The important thing to remember is that early recognition and intervention is the best strategy to prevent progression to more severe symptoms.

2. Causes of Hyperglycemia:

- Too much food
- Too little insulin
- Illness
- Infection
- Decreased activity
- Stress
- Increased growth
- Puberty

The recognition and treatment of significant **hyperglycemia** are vitally important. Symptoms of **hyperglycemia** may vary somewhat from individual to individual, or from episode to episode and can include:

- Thirst
- Blurred vision
- Lack of concentration
- Weight loss

- Frequent urination
- Sweet, fruity breath
- Fatigue/sleepiness
- Stomach pains
- Increased hunger
- Flushing of skin

The following symptoms indicate that **hyperglycemia** has escalated. Mild symptoms PLUS:

- Dry mouth
- Nausea
- Vomiting
- Stomach cramps
- Sweet, fruity breath

The last group of symptoms indicates **severe hyperglycemia** and probable ketoacidosis.

Mild and moderate symptoms PLUS:

- Labored breathing
- Profound weakness
- Confusion
- Loss of consciousness

The important thing to remember is that intervention at any of these levels will prevent progression to more severe symptoms.

Treatment for Hypoglycemia/Hyperglycemia

Diabetes is managed with medication, nutrition, physical activity, and glucose monitoring. Intervene promptly when hypoglycemia is mild/moderate to prevent the progression to severe symptoms. The steps for intervening with each student will be outlined in his/her DMMP.

- The initial response would be to treat with oral carbohydrates according to the DMMP.
- Glucagon is administered as an injection when a person's blood sugar becomes so low that the person is unresponsive, passes out, or cannot eat or drink safely. Glucagon is a hormone that raised blood sugar levels. Glucagon can cause severe nausea and vomiting when the person regains consciousness but can be a lifesaving treatment for extremely low blood sugar.

The goal in the treatment of hyperglycemia is to lower the blood glucose level to within a student's target range. Always follow the individual student's DMMP which may include the administration of insulin.

Diabetes: Care of the Student

T.C.A § 49-50-1602 (d)(1) states that a local board of education or a governing board for a non-public school may permit school personnel to volunteer to assist with the care of students with diabetes if parent or guardian and the student's personal health care team have developed a medical management plan that lists the health services needed by a student at school and is signed by the student's physician, nurse practitioner or physician assistant.

The parent or guardian shall have given permission for the school's trained volunteer or school nurse to participate in the care of the student with diabetes. The written permission shall be kept in the student's school records. Assistance in the care of a student by trained volunteers must be documented.

T.C.A. § 49-50-1602 (d)(4) states that if a school nurse is on site and available to assist, the school nurse must provide any needed diabetes assistance rather than other trained school personnel

volunteering to assist the student. In addition, a school RN has the primary responsibility for maintaining all student health records.

T.C.A. § **49-50-1602** (b) states that school personnel who volunteer under no duress or pressure and who have been properly trained by a registered nurse employed or contracted by the LEA may administer glucagon in emergency situations and may administer daily insulin to a student based on that student's Individual Health Plan (IHP). However, if a public school nurse is available and on site, the nurse shall provide this service to the student.

The Diabetes Medical Management Plan (DMMP) details the specific conditions for all routine and emergency diabetes care tasks, including insulin and glucagon administration. Non-medical school staff can be trained to assist students with these tasks as laid out in the DMMP. However, any and all clinical assessments are made by the student's health care providers in the development of the DMMP; school staff is simply following the plan as prescribed. Once the DMMP has been provided to the school, it is implemented collaboratively by the school diabetes team, which includes the school nurse (RN), student, parent/guardian, and other school personnel.

The need for performance of or assistance with diabetes care tasks will vary from student to student.

Routine Care of the Diabetic Student

- Many students will be able to handle all or almost all of their routine diabetes care by themselves. They can check their own blood glucose, and they can dose and give their own insulin or medication, keeping it in balance with physical activity and food intake.
- Some students—because of age, developmental level, or inexperience—will need help from school staff, including performing tasks like insulin administration, blood glucose monitoring, or carbohydrate counting.
- The use of insulin pumps and continuous glucose monitors is becoming increasingly common and reduce the need for injections to administer insulin and finger sticks for glucose monitoring. Depending on the type of device used, the student may need to do 0-2 calibrations per 24-hour period.

Emergency Care of the Diabetic Student

ALL students with diabetes will need help in the event of an emergency situation.

Carbohydrate Counting and Nutrition Guidance

The nutritional needs of a student with diabetes differ slightly from the needs of a student without diabetes. Both should eat a variety of foods to maintain normal growth and development. The major difference is that the timing, amount, and content of the food that the student with diabetes eats are carefully matched to the action of the insulin.

There are two methods of meal planning using carb counting:

- Following a consistent carb intake meal plan
- Adjusting insulin for changing carb intake

Students who follow a consistent carb meal plan aim for a set amount of carb grams at each meal and snack and do not adjust their mealtime insulin for the amount of carb intake. Students who use

multiple daily injections or an insulin pump usually use the adjusting insulin for changing carb intake of meal planning. This method requires adjusting insulin doses to cover the number of carbs consumed using an insulin-to-carb ratio. This information will be provided in the student's DMMP. Carb counting involves calculating the number of grams of carbohydrates or choices of carbohydrates the student eats.

- This information can be obtained from nutrition information on food labels, school nutrition services, parents or at CalorieKing.com, and is used to determine the amount of insulin the student needs to control blood glucose for any given meal or snack.
- The student's meal plan is designed to balance nutritional needs with the insulin regiment and physical activity level.
- The student should eat lunch at approximately the same time each day.
- Snacks may be necessary for a child with diabetes to balance the peak times of insulin action. Many children with diabetes will need to take insulin via pump or injection to match the carbs in snacks, especially if eating extra carbs, such as at a class party.
- For those students who typically eat a snack, a missed or delayed snack could result in hypoglycemia.

Roles and Responsibilities for Management of Diabetes

Collaboration, cooperation, and planning are key elements in developing and implementing successful diabetes management at school. As is true for children with other chronic diseases, students with diabetes are more likely to succeed in school when students, parents, school nurses, principals, teachers, other school personnel and the student's health care providers (or personal health care team) work together to ensure effective diabetes management.

Students with Diabetes

To remain active and healthy, the student with diabetes should strive to maintain blood glucose levels within a target range. School health policy and staff will promote and support toward self-sufficiency and independence in following the DMMP designed by his/her health care provider. The student, however, must also assume age-appropriate responsibility. The following responsible actions are recommended:

- Cooperate with school personnel in implementing the diabetes plan of care.
- Wearing a medical alert identification tag while in school is strongly advised.
- Observe all local policies and procedures related to blood and body fluid precautions and sharps disposals.
- Complete the initial and ongoing diabetes education provided by the health care provider.
- Seek adult help immediately when low blood glucose levels are suspected or verified by blood glucose monitoring.
- Record and report all blood glucose monitoring according to the medical plan of care.
- Conform to all nutritional guidelines according to the medical plan of care.
- Demonstrate competence in blood glucose monitoring and insulin administration in the school setting.

Parent/Guardian

- Inform the school as soon as possible when a student is newly diagnosed as having diabetes or when a previously diagnosed student enrolls in a new school so that planning and training of personnel can be arranged quickly. Ideally, parents should work with the school staff prior to their child's admittance to ease the student's transition into the school environment.
- Participate in team meetings and development of the IHP or communicate with individual school personnel who will be in contact with your child.
- Provide the school with emergency contact information (cell phone, work number, etc.) and designate someone to act on your behalf if you are unavailable.
- Provide the school nurse with medication orders from a health care provider, signed consent forms to administer medications, and health information on a need-to-know basis. The school nurse can consult with the diabetes provider without parental permission and the diabetes provider can also contact the school nurse without parental permission.
- Provide the school nurse with any new written medical orders when there are changes in the medical management that must be implemented in the school.
- Provide and transport to the school all medications, equipment, supplies, and carbohydrate snacks associated with the medical management of the student's diabetes.
- Assume responsibility for the maintenance and calibration of all medical equipment.
- Work with healthcare providers, their staff, and the child to promote self-sufficiency in diabetes management.
- Provide the school with updates on the child's diabetes status annually and as needed.
- Communicate with schools regarding necessary accommodations for school field trips or off-site school-sponsored events.
- Providing a medical alert identification tag for your child is strongly advised.

School Nurse (RN)

- Introduce yourself to the student and orient him/her how to access the nurse.
- At the beginning of the school year, meet with the parent/guardian of the student with diabetes or as soon as possible after diagnosis.
- Obtain and maintain a current knowledge base and update skills and abilities related to the medical management of diabetes in the school-age population.
- Organize and facilitate planning of meetings with the student's parent/guardian and other key school staff to discuss the planning and implementation of the student's IHP.
- Develop an IHP in cooperation with the student, the parent/guardian, the health provider, and other school-based staff.
- Assure that the IHP with the Emergency Care Plans includes the student's name and photo, if available.
- Regularly review and update the IHP whenever there is a change in medical management or the student's response to care.
- Establish and maintain a working relationship with the student's parent/guardian and health care provider and act as a liaison between the student's authorized health care provider and the school.
- If necessary, work with the health care provider and/or parent to re-evaluate the student's competency level to further enhance the student's independence or, if necessary, to require closer supervision until the student's knowledge and skills improve.
- Practice universal precautions and infection control procedures at all student encounters.

- Train school personnel who volunteer and are willing to assist with the care of students with diabetes. The nurse shall be under no duress to qualify any volunteer unless such volunteer is trained and deemed by the nurse to be competent.
- Provide or arrange for student-specific training to all school-based personnel who will have direct contact with the student on how to respond in an emergency.
- Maintain appropriate documentation of the training and care provided and monitor the documentation of services provided by unlicensed assistive personnel.
- Act as a resource to the principal and other school-based personnel, providing or arranging for in-service education appropriate to their level of involvement with the student with diabetes.
- Establish a diabetes resource file of pamphlets, brochures, and other publications for use by school personnel.
- Participate in Individualized Education Planning and Section 504 planning meetings and provide relevant health information.
- Establish a process for ongoing and emergency communication with the parent/guardian (this should include a parental notification procedure to address repairing or replacing equipment, and replenishing supplies and medications), the authorized health care provider, the unlicensed assistive personnel, and the school staff that come into direct contact with the student.
- Request a functioning communication device in the health clinic (example: phone system, intercom or two-way radios).
- Serve as the student's advocate.
- Respect the student's confidentiality and right to privacy.

School Administrator

- Participate in planning the IHP as a member of the team and support school personnel, the student and parents in its implementation.
- Review emergency response plans to ensure that any food, equipment, or services unique to the needs of students with diabetes are covered by those plans.
- Provide leadership for all school-based personnel to ensure that all health policies related to diabetes management at school are current and implemented.
- Monitor overall compliance with the implementation of the emergency response plan.
- Recommend that communication devices are provided and are in functioning condition in the appropriate location – nurse's clinic, classroom, cafeteria, etc.
- Collaborate with the school nurse in selecting and designating unlicensed assistive personnel to provide the student-specific services required for each student with diabetes in their school.
- Require that training and education of all involved personnel are completed and documented.
- Inform the parent/guardian if any student experiences an emergency incident (hypo/hyperglycemia) at school.
- Communicate in advance with the school nurse when a field trip or off-site school-sponsored event or class party might require an adjustment in their meal plan or insulin administration.
- Provide adequate time for the school nurse to train school personnel who volunteer.

Educational Personnel (Teachers, aides, coaches, etc.)

- Participate in team meetings for the student with diabetes.
- Be aware of which students have diabetes and cooperate with the accommodations listed in the IHP or Section 504 Plan.
- Recognize the signs and symptoms associated with hypoglycemia and hyperglycemia.
- Be sure volunteers, student teachers, aides, specialists, and substitute teachers are informed of the student's diagnosis and necessary safeguards on a need-to-know basis.
- Request that the classroom has a functioning intercom, two-way radios, or other communication device for communication with the school nurse and administrator.
- Work with the school nurse to educate other parents about the presence and needs of the child with diabetes on a need-to-know basis and with parental permission.
- Respect the student's right to confidentiality and privacy.
- Inform parents of any special school events where food will be served.
- Ensure that the student (e.g., engaged in physical or extracurricular activity) has a safe location (if possible) to monitor blood glucose or administer insulin in accordance with the student's IHP. By law, students with diabetes must not be restricted to certain areas to self-manage.
- Monitor before exercise or strenuous activity and allow for snacks before and after the physical activity if indicated in the student's IHP.
- Communicate and collaborate in advance with the school nurse when a field trip or off-site school-sponsored event or class party might require an adjustment in their meal plan or insulin administration.
- If for safety reasons, medical alert identification needs to be removed during specific activities, the student should be reminded to replace this identification immediately after the activity is completed.
- Notify substitute teachers of students with diabetes and leave a clear plan of care regarding the special needs of the student.
- Keep the student's Emergency Care Plan readily accessible in the classroom in an organized format for substitute teachers and for use in emergencies.

School Counselor

While the school counselor and/or social worker may not always have direct contact with the student, they should be aware of the students in their schools who have diabetes and the potential impact of diabetes and its treatment on the student's behavior and performance.

- Communicate with the school nurse as needed in the development of the student's IHP.
- Monitor anxiety, stress levels, and social development of students with diabetes and provide interventions as appropriate.
- Act as a resource to parents and students regarding anxiety, stress and normal development.
- Educate classmates to avoid endangering, isolating, stigmatizing or harassing students with diabetes (with parental and student's permission) per LEA policy (at a minimum annually).

Food Service Manager/Personnel

Food and nutrition service staff members play an important role in providing nutritional and balanced meals for all students with diabetes.

- Provide nutritional information including carb counts for all foods/drinks served.
- Keep information about students with diabetes readily available.
- Respect the student's right to confidentiality and privacy.
- Have a functioning communication device to support emergencies.
- Be knowledgeable about the activation of emergency services.
- If a student is suspected to be experiencing a diabetes emergency, activate the school's emergency response team.

School Bus Company

- Understand that students with diabetes may carry snacks or equipment for emergency response and may need to eat and/or drink during the bus ride.
- Provide functioning communication devices.
- Know local emergency medical services procedures.
- Communicate to the school nurse any concerns regarding the student's actions or behavior regarding diabetes management.
- Respect the student's right confidentiality and privacy.
- Individual LEA's school bus company should consider receiving emergency CPR training.

Volunteer and Trained School Personnel

- Understand that the student's DMMP, IHP, 504 Plan, IEP, or other education plan.
- Understand the student's Emergency Plan.
- Attend the student's school health team meetings.
- Participate in diabetes management training by the school registered nurse or designated educator.
- Assist with the care of the student, which may include blood glucose monitoring, urine or blood ketone testing, and emergency Glucagon and Insulin administration, as trained.
- Practice universal precautions and infection control procedures.
- Participate in planned evaluations of care.
- Assistance with care must be documented in accordance with these guidelines and according to standards and requirements outlined in school policy.
- Observe and record student health and behavior, noting any changes over time.
- Communicate directly and regularly with the school nurse or the supervising health professional.
- Consult with an appropriate member of the student's school health team when questions arise or the student's health status changes.
- Respect the student's confidentiality and right to privacy.
- Accompany the student on field trips or off-campus school-sponsored sports events and activities, as determined by the 504 Plan, IHP, IEP, or other education plan.
- Provide support and encouragement to the student.
- Help ensure that the student has a supportive learning environment.

Off-Site School Sponsored Event/School Administered Care Programs

- No student should be excluded from a field trip or extracurricular program or activity due to a diagnosis of diabetes.

- A school must provide the accommodations and services the student needs to partake in the trip.
- A school may only exclude a student from a field trip if the student's participation presents an unacceptable risk to the student's health or safety.
- The parent of the student should be allowed to accompany their child on the school trip in addition to the school chaperone.
- Unless all parents are required to participate in the field trip, parents of students with disabilities may not be required to participate in the field trip in order to care for the student.
- The teacher requesting/organizing the field trip will coordinate in advance with the principal, school RN, or designee to meet the student's health care needs.
- Parent/guardian must provide glucose meter and supplies, appropriate snacks, and a suitable high glucose source (such as glucose tablets, a tube of cake frosting, or other oral solution) for their child's emergency for availability during extracurricular activities.

Before A Field Trip Or Extracurricular Activity, the School SHALL:

- Notify the student's parent(s) in a timely manner in order to prepare for food/snacks/medications.
- Make certain that an emergency communication device is always present. A minimum of two (2) people with cell phones is recommended.
- Maintain records of the names and phone numbers of parent/guardian of the student and the health care provider.
- Be sure that a trained staff person is assigned to stay with the student at all times if the emergency medication has been administered.
- Designate someone to call the student's parents with the name and location of the hospital.
- Verify that the school employee accompanying the student has received specific training in the blood glucose monitoring procedure and insulin administration as documented on the skills checklist by the registered nurse. The school employee must also be trained in the signs/symptoms of high and low blood sugar and follow the student specific emergency care plan. This employee will supervise the carrying of the glucose meter and supplies, snacks, glucose source, a copy of the orders, and emergency information card.
- Be sure that the bus driver has the emergency route to the hospital if the cell phone cannot make the connection to EMS. Only if EMS cannot be reached should the bus driver take the child to the nearest Emergency Room on the bus.

Blood Glucose Monitoring

- According to the IHP, if the student ordinarily performs his/her own finger stick and testing, he/she will do this while on the field trip if necessary.
- Some students may wear a CGM device and perform 0-3 checks/day for calibrations, depending on the type of device.
- The healthcare provider orders will be followed if high or low blood sugar is found. If after doing so, the student appears disoriented or level of consciousness deteriorates, call 911.

Diabetes Medication Administration

T.C.A. § **49-50-1602(b)**: "If an LEA permits, school personnel who volunteer under no duress or pressure and who have been properly trained by a registered nurse employed or contracted by the LEA may administer glucagon in emergency situations ... However, if a public school nurse is available and on site, the nurse shall provide this service to the student."

The public school nurse may train any school personnel who volunteer and are willing to assist with the care of students with diabetes but should seek to ensure at least two (2) volunteers are available.

Glucagon Administration

Glucagon is a hormone that causes the liver to release sugar into the blood. It is used to raise the blood sugar when a child is unable to take liquids or food by mouth because of severe sleepiness, unconsciousness or seizure activity. Glucagon is an emergency medication, given by needle and syringe. It should be given immediately in the event of severe hypoglycemia. It is important to remember that the **risk of not giving Glucagon is more life-threatening than giving it under these emergency conditions.**

If Glucagon is part of a child's DMMP or emergency care plan then a health care provider's order and written parental permission needed.

- One Glucagon Emergency Kit supplied by the family is needed.
- Keep Glucagon at room temperature, and inform the appropriate staff of the storage location.
- Check the date of Glucagon kits on a regular basis. Obtain a refill prior to expiration date and dispose of expired medication.
- When possible, practice drawing up Glucagon with a Glucagon demonstration Practice kit or an expired kit.
- Glucagon must be missed per the specified instructions.

If the school nurse is unavailable, trained school personnel who volunteer may administer glucagon to a student with diabetes who may require prompt treatment in order to protect against serious harm or death. No trained school personnel who volunteer shall administer medication unless:

- Such trained personnel annually completes any training required by the school nurse in the administration of medication with injectable equipment used to administer glucagon.
- The school nurse has attested, in writing, that such trained school personnel has completed such training.

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Steps for Administering Glucagon

1. Never attempt to give a student suffering from severe hypoglycemia food or drink or put anything in their mouth because this could cause choking.
2. Position the student on their side to prevent choking in the event of vomiting, which is a side effect of the Glucagon.
3. Have a staff member call for emergency medical assistance (911) and also have them notify the parent/guardian.

1 mg of freeze dried Glucagon (vial)



1 mL of water for reconstitution (syringe)

4. Remove the cap from the glass vial containing the powder and wipe with an alcohol swab.
5. Remove the needle cover from the syringe (do not remove the plastic clip from the syringe) and insert the needle into the vial through the rubber stopper.
6. Inject all of the fluid from the syringe into the vial containing powder.
7. Gently roll/swirl to mix until all of the powder is dissolved in the liquid and solution is clear.
8. Inspect the vial. Glucagon, when mixed, should be clear and colorless like water. Do not administer if the liquid is discolored.
9. Hold the vial upside down in one hand and insert the syringe into the vial.
10. For most students, draw all of the solution into the syringe. For use in children weighing <44 pounds, withdraw half of the liquid (to the 0.5 mark on the syringe). Invert syringe and tap gently, then push slightly on the plunger to expel any large air bubble.
11. Clean the site with alcohol if possible.
12. The best locations to give Glucagon are in the buttocks, thighs or upper arms.
13. Inject the Glucagon at a 90-degree angle and push syringe plunger all the way down.
14. Remove the needle from the skin and apply light pressure at the site.
15. Dispose of the needle and any unused medication in a sharps container.
16. Confirm that 911 has been called.
17. Give a fast-acting glucose source and a long-acting glucose source (like cheese and crackers) once a student is awake and able to eat safely.
18. Stay with the student until EMS arrives. It may take the student 15-20 minutes to regain consciousness.

Don't be surprised if:

- The student doesn't remember being unconscious or is incoherent.
- The student has nausea or vomiting.
- The student's blood glucose becomes very high, BUT do not administer insulin after a severe low blood glucose event.

Administering Daily Insulin

Insulin is a hormone that can only, at this time, be taken by multiple injections or by an insulin pump. Insulin lowers blood sugar. The various kinds of insulin start and continue to work for differing lengths of time. Most children take a combination of insulin at different times of the day. The types and amount of insulin the student needs must be ordered by the physician or nurse practitioner.

Students with type 1 diabetes and some students with type 2 diabetes require insulin to be given at regular times each day. Some students who need insulin during the school day are able to administer it on their own; others need supervision; and some need someone to administer the insulin for them. The school nurse (RN) should provide this help in accordance with the IHP. School personnel who are responsible for the student's care should be knowledgeable about the student's insulin delivery system and how to respond to an emergency.

The three most common ways to administer insulin are with a syringe, an insulin pen, or an insulin pump. The manufacturers of insulin, insulin syringes, insulin pens, and insulin pumps have websites where school personnel can learn more about these products.

Storing Insulin

- Review the product storage instructions and check the expiration date.
- Refrigerate unopened vials and insulin pens.
- Be careful not to freeze.
- Once opened, store at room temperature (less than 86 degrees) for 28 days. Discard after this time.

When to Give Insulin:

- Insulin must be administered as specified in the student's DMMP. The DMMP specifies the orders of the student's health care provider.
- The DMMP should clearly specify insulin dosing procedures.

Dosing Insulin:

- Some students will use a standing insulin dose (same dose) regardless of blood glucose level or food intake.
- It is very important to give short-acting meal doses at the right time, generally before meals, or as soon as possible.
- Others will have a varied dose, depending upon:
 - Carb or meal boluses, to cover what is eaten
 - Correction boluses, to cover high blood glucose

Where to Give Insulin:

- Insulin works best when it is injected into a layer of fat under the skin, above the muscle tissue.
- Rotating sites is important to insulin absorption.
- Common preferred sites are the abdomen, thighs, buttocks, and upper arms.
- The student should help choose the injection site.

After Giving Insulin:

- A few points to keep in mind after insulin is given, regardless of whether it is by syringe, pen, or pump:
 - Check the site for leaks (Occasionally injection sites will leak when insulin is administered).
 - Document on the log sheet.
 - When correction doses are given to lower blood glucose, a retest should be done, if specified in the DMMP, to determine how well the correction dose worked.
 - When insulin has been given prior to a meal or snack, it is important that the correct amount of food is eaten soon (beginning within 15 minutes) after the insulin has been taken.

Diabetes Training

Training for School Nurses

T.C.A. § **49-50-1602(d)(3)** states that all school nurses must be educated in diabetes care and have knowledge of the guidelines.

Some health care professionals may have little expertise in diabetes education and/or management but provide support to students with diabetes. Licensed health care professionals employed or contracted by an LEA who will be providing care to a student with diabetes should demonstrate competency for both knowledge and skills on an annual basis.

- Suggested Training Resource for School Nurses
 - **Helping Administer to the Needs of the Student with Diabetes in School (H.A.N.D.S.)** H.A.N.D.S. is a live continuing education full-day program developed by the National Association of School Nurses (NASN) for school nurses to equip the school nurse with current diabetes knowledge and provide tools and resources to facilitate effective diabetes management for students at the school. It is presented by a School Nurse with a specific interest in diabetes and a Certified Diabetes Educator. For more information, contact [NASN](#).
- Training for School Personnel Who Volunteer
 - T.C.A. § **49-50-1602(b)** states that school personnel who volunteer under no duress or pressure and who have been properly trained by a registered nurse employed or contracted by the LEA may administer glucagon in emergency situations and may administer daily insulin to a student based on that student's Individual Health Plan (IHP). Training to administer glucagon and insulin shall be repeated annually and competencies shall be documented at least twice a year in the employee's personnel

file. The provisions of subdivision (a)(3) regarding protection from liability shall apply also to the volunteers who provide services pursuant to this subsection and the registered nurses who provide their training.

- T.C.A. § **49-50-1602(a)(3)** provides that any person assisting in self-administration of medication or performing health care procedures, including administration of medications under this section, and any local board of education or governing board for a non-public school authorizing the self-administration of medications or the performance of health care procedures shall not be liable in any court of law for injury resulting from the reasonable and prudent assistance in the self-administration of such medication or the reasonable performance of the health care procedures, including administration of medications, if performed pursuant to the policies and guidelines developed by the Departments of Health and Education and approved by applicable regulatory or governing boards or agencies.
- T.C.A. § **49-50-1602(d)(3)** states that school personnel, who volunteer under no duress to assist with the care of students with diabetes, must receive training from a school RN. The school RN may use certified diabetes educators and Registered dietitian nutritionists to assist with the training. All training must be renewed on an annual basis and competency must be noted in the personnel file. No school personnel shall be required to volunteer for the training. School personnel may not be reprimanded, subject to any adverse employment action or punished in any manner for refusing to volunteer.
- T.C.A. § **49-50-1602(d)(5)** states that the following persons shall not be liable in any court of law for injury resulting from reasonable assistance with the care of students with diabetes if performed pursuant to the guidelines developed by the Departments of Health and Education:
 - A. Any school RN who provides the training;
 - B. Any person who is trained and whose competency is indicated in the person's personnel file as required in subdivision (d)(3); and
 - C. Any local board of education or governing board for a non-public school that authorizes school personnel to volunteer to assist with the care of students with diabetes.

School Registered Nurses who provide training to volunteers under this subsection shall not be subject to any disciplinary or otherwise adverse licensing action by the board of nursing for injury resulting from assistance with the care of students with diabetes if performed pursuant to these guidelines.

Suggested Components for Training Curriculum

Training curriculum and teaching methods for preparing the school personnel who volunteer should include both knowledge and skills components. Both a written test and a skills check should be included, and the learner must demonstrate competency on both in order to be designated as a trained school personnel volunteer.

A copy of the training guidelines, test and skills check results, and a record of staff training must be maintained by the school nurse (RN) or principal.

Content shall include, at a minimum, the following elements so that the learner:

- Understands the essential elements of the DMMP, IHP, 504 Plan, IEP, or other education plan.
- Has a general understanding of type 1 and type 2 diabetes.
- Understands the effects of balancing insulin, food, and exercise upon a student's blood glucose levels.
- Recognizes the signs and symptoms of low blood sugar/glucose (hypoglycemia) and high blood sugar/glucose (hyperglycemia) levels.
- Understands and knows how to take or help the student take proper action if the blood sugar/glucose and/or urine ketones are outside the range indicated by the student's diabetes management and treatment plan.
- Performs or assists a student with monitoring of blood sugar/glucose using a continuous glucose monitoring (CGM) system or a glucose monitor provided by the student's family and/or urine testing strips for ketone evaluation and recording the results in the designated record.
- Knows how to safely and properly administer insulin and glucagon according to the student's diabetes management and treatment plan and individual health plan and knows how to record the action in the designated record.
- Knows and recognizes the signs and symptoms and blood sugar/glucose levels that require emergency assistance and knows how to take proper action.
- Knows and understands the nutritional needs of students with diabetes, including but not limited to, the need for regular meals, how snacks are utilized in the daily regimen of children with diabetes, how exercise affects blood sugar/glucose, and how changes in schedules, such as illness, tests, and field trips can affect children's nutritional needs.
- Knows when to call the parent(s), a healthcare professional, and/or 911 for help.

Suggested Training Resources for School Personnel

Helping the Student with Diabetes Succeed: A Guide for School Personnel

- prepared by a panel of organizations
- published by the National Diabetes Education Program
- the manual can be accessed [here](#) web link:

The comprehensive guide provides a framework for supporting students with diabetes with an optimal team approach. It has copy-ready sample action plans and includes the following topics:

1. Diabetes Primer
 - a) Overview of type 1 and type 2 diabetes basics
 - b) Effective diabetes management in schools
 - c) How a school can plan and implement effective diabetes management
 - d) Why diabetes self-management is important
 - e) Why diabetes management training is essential for school personnel
2. Responsibilities of School Personnel
 - a) School district administrator
 - b) Principal, school administrator, or designee
 - c) School nurse (registered nurse)
3. Trained Diabetes Personnel
 - a) Teachers

- b) Coaches and Physical Education Instructors
 - c) Food Service Managers, Lunchroom Staff, or Monitors
 - d) Bus Drivers
 - e) Guidance Counselors or School Psychologists
4. Responsibilities of the Parents and/or Guardians and Student
 5. Sample DMMPs and Individualized Emergency Plans
 6. Applicable Federal Laws
 - a) Section 504 of the Rehabilitation Act of 1973
 - b) Americans with Disabilities Act of 1990
 - c) Individuals with Disabilities Education Act (IDEA)

Diabetes Care Tasks at School: What Key Personnel Need To Know

Two-part training curriculum consisting of 13 PowerPoint slides with corresponding video segments developed by the American Diabetes Association.

- The modules:
 - are intended to be used by a trainer who is a school nurse (RN) or a healthcare professional with expertise in diabetes care in order to train other nurses and staff members about diabetes care tasks at school
 - are available [here](#)
 - can be used in conjunction with '[Helping the Student with Diabetes Succeed: A Guide for School Personnel](#)'

Suggestions for Obtaining Training Supplies

Schools may be able to obtain training supplies from the following sources:

- pharmacies
- manufacturers of diabetes products and supplies
- local health departments
- parent donations, especially expired glucagon kits
- physician's office
- hospitals and clinics

Tasks & Skills Checklist

School nurses (RN) assess skills as part of the initial training as well as during any subsequent training. The school nurse (RN) can use this checklist for initial, annual and periodic reviews during the school year.

Participants should receive hands-on training in the skills listed below and should be able to demonstrate that they can successfully perform the tasks correctly three times:

- Individual Health Plan
- Read and understand each step
- Identify signs of high and low blood sugar/glucose levels
- Describe actions to be taken
- Help a student respond to high and low sugar/glucose levels
- Know when and who to contact for information or help (parent, student's health care provider, and emergency medical services)
- Testing

- Use a blood glucose monitor(s) furnished by the student(s) or continuous glucose monitoring device
- Calibrate equipment
- Check blood or urine ketone level
- Record results and know what action is indicated

Insulin Administration

- Demonstrate aseptic and sterile techniques
- Use insulin syringes, pens, or other delivery devices
- Prepare and calculate accurately the correct dose
- Inject subcutaneous (under the skin) insulin
- Record action (time, dose, site) and any student observation

Insulin Pump

- Recognize proper attachment
- Know how to disconnect the pump when indicated
- Know how to administer a bolus dose of insulin
- Recognize signs of malfunction and what to do in the event of a problem
- Note: Specific training by a healthcare professional that works with the specific pump and written directions from the manufacturer is warranted. Parent participation in this instruction is RECOMMENDED.

Glucagon Administration

- Know when to administer glucagon and call for emergency help
- Prepare medication using diluent
- Calculate the proper dose, as ordered by an authorized healthcare professional
- Record action and blood sugar/glucose test results

Universal Precautions

- Staff and students with diabetes need to adhere to the district or school policy that addresses universal precautions to prevent potential needle stick injuries and potential infection.
- The school or district policy should be consistent with standard Universal Precautions and local waste-disposal laws.
- Local waste disposal laws vary from community to community.

Food Allergy and Anaphylaxis

The following guidelines have been developed to assist public school districts and non-public schools.

Pursuant to T.C.A § **49-50-1602(f)** - effectively preventing and controlling the incidences of life-threatening food allergies efficiently and managing the health and safety needs of children with life-threatening allergic conditions. Food is the most common cause of anaphylaxis. However, other causes of anaphylaxis include insect bites, bee stings, natural rubber latex, and/or medications and even in rare instances exercise. Food allergy is a growing food safety and public health concern in the United States because of the increased prevalence. While these guidelines focus primarily on food allergies they may be applied to all sources of anaphylaxis.

School settings are faced with major challenges due to students with one or more food allergies. According to the [Centers for Disease Control and Prevention](#), an estimated 4% - 6% ^{[1], [2]} of children in the United States are affected. Even small amounts of allergen in food can cause a reaction in individuals who are sensitive to the specific allergen. Strict avoidance of the food allergen is the only form of prevention of life-threatening food allergy reactions. In some cases, deaths have occurred in schools, resulting from not recognizing symptoms and not responding promptly or effectively. The most common cause of death related to anaphylaxis is due to delayed administration of epinephrine.

Emergency Allergy Response Plan and Allergy Action Plan

Each school district/LEA shall develop a comprehensive program for managing allergies at school. Each school shall have an allergy management team which may include but is not limited to the school nurse, principal, teacher, student, food service director, bus driver, school physician, and counselor.

Implementation of health care procedures, guidelines, and plans that focus on allergy education, awareness, avoidance and immediate treatment of allergic reactions are critical to saving lives. School districts should anticipate the enrollment of students with life-threatening allergies in their schools and hence be prepared to assist these potential individuals when needed.

Each school district/LEA shall develop and implement an Emergency Allergy Response Plan that focuses on prevention and an appropriate response procedure should an unexpected emergency occur. This plan should be in place before the start of the school year and may be administered and adopted into policy and procedures at the district and local education level. Using the state food allergy guidelines plan as a guide, each school district must develop processes to identify all students with food allergies and develop and implement an Individualized Health Plan (IHP) with an Allergy Action Plan for each specific student.

Emergency Allergy Response Plan

The LEA's system-wide policy will outline the requirements of a program to manage students with life-threatening allergies. These more comprehensive and detailed protocols should include measures to reduce exposure to allergens and procedures to treat allergic reactions. The four suggested components include:

- Education and Training – All school personnel should have general education on managing life-threatening allergies.
 - Mandatory training requirements include:
 - Scheduling and implementation of the training in collaboration with the LEA administration by the school nurse (RN)
 - Annual training at a minimum
 - Cleaning protocol for classroom and cafeteria (the type of cleaners, frequency, etc.)
 - Guidelines for snacks, parties, lunch substitutions based on USDA guidelines
 - Allergen-free tables in cafeterias and classrooms, if desired. Be careful not to compromise student confidentiality.
 - Students/staff hygiene – frequent hand washing
 - Field trip management

- Bus/transportation management:
 - Storage of epinephrine auto-injectors
 - Instructions for care and use
- Emergency response protocol:
 - Personnel responsibilities
 - Communication procedures
 - Emergency drills
 - Administration/possible repeat administration of epinephrine
 - Demonstration and competency checks on the administration of the epinephrine auto-injectors
- Training in cardiopulmonary resuscitation (CPR) based on LEA policy and T.C.A.'s § **49-5-414** and § **49-3-359**
- Record keeping/documentation:
 - Initiation and distribution of the IHP with an Allergy Action Plan by the school nurse (RN). Copies should be in a clearly designated and readily accessible area at all times and updated as changes occur in the student's health status, including a current photo if feasible.
 - Locations of epinephrine auto-injectors and monitoring of expiration dates
 - Review of system-wide policies on allergies as needed.
 - Lists of trained personnel and documentation of competency maintained by a school administrator or designee.
 - Policies regarding student self-administration of epinephrine, with competency to be evaluated by the school nurse (RN) twice annually.
 - Identification of students with medical diagnosis or chronic health issues who are at risk for allergies by review of health information by the school nurse (RN).
- Development and reviews of the Allergy Action Plan:
 - The Individualized Health Care Plan (IHP) with the Allergy Action Plan should be based on information provided by the parent, licensed medical provider and the school nurse (RN).
 - The primary goal of the Allergy Action Plan is to provide direction to the school nurse (RN), school personnel, and EMS responders that enable them to react promptly with specific procedures for the particular student.
 - It is important to revise an IHP as needed based on student's ability to self-administer epinephrine auto-injectors and the health care provider's statement on their competency.
 - Students should have a minimal bi-annual nursing assessment of competency and proficiency.
- Protocols for classrooms and cafeterias that include strategies to reduce exposure to allergens:
 - Plan for activating EMS and notifying the school nurse, the parent and school administrators.
 - Functioning communication devices are recommended for personnel use whether on the school campus, field trips, bus routes, or extracurricular events. Examples

include but are not limited to intercom systems, telephones, cell phones, and two-way radios.

- Emergency drills – implement a periodic anaphylaxis drill similar to a fire drill.
 - Communication devices should be tested with emergency drills per LEA policy and malfunctions corrected immediately.
 - Collaboration should occur with local emergency response teams to assure that they will respond to a 911 call with epinephrine. Do not assume that all ambulance services carry it.
 - Include in the Allergy Action Plan steps to notify the school nurse and parent immediately of an anaphylactic reaction.
 - Develop a School Crisis Plan – in the event of a fatal reaction, plan to deal with the death of a student. There should be counseling for classmates and parents.
 - The school nurse should maintain open communication with all members of the allergy management team(s), particularly the parent and the health care provider.
- Special challenges to consider on an individual basis when creating protocols:
 - Religious or ethnic influences
 - Vending machine options
 - Home economics/culinary classes/biology labs
 - Provision for safe art supplies
 - Outdoor events beyond cell phone coverage area
 - Emergency crisis plan in the event of a fatal anaphylactic reaction that results in the death of a student; identify crisis team members
 - Celiac disease, Food Protein Induced Enterocolitis Syndrome (FPIES) and eosinophilic esophagitis could be mistaken as allergic reactions to food. It should be clearly stated in the IHP of the child with this diagnosis that epinephrine is not the appropriate treatment.
 - Evaluation of the Emergency Allergy Response Plan:
 - A written narrative should document each emergency exposure to allergens. The school nurse and the allergy management team should evaluate the cause of the exposure, effectiveness of personal responses and suggestions for improvements.
 - Conduct post exposure review to examine any problems with the IHP. Then update annually and as needed.
 - There should be a minimum of one annual review of system-wide policies on allergy management. Review and update of the Individual Allergy Action Plan will be conducted as needed.
 - Complete incident reports of anaphylaxis based on LEA policy.

Allergy Action Plan

All students with identified life-threatening allergies should have an Allergy Action Plan with the student's Individual Health Care Plan (IHP). The RN-level school nurse will develop, review, and update the plan as needed. The Allergy Action Plan should include the following information:

- Name of the student and photos (if a picture is available)
- The specific offending allergens or generic ingredients that could be identified on labels
- Warning signs of an allergic reaction
- Health care providers and/or allergy specialists with name and phone numbers

- Emergency response procedures designating who administers the epinephrine based on the location of the exposure
- Where epinephrine auto-injectors and backup auto-injectors will be stored

Once formalized, the Allergy Action Plan will contain a summary of the nursing assessment describing the student's competency to carry and administer his or her own epinephrine auto-injectors. A copy of the Allergy Action Plan will accompany the student to the emergency room. Revise the action plan as needed based on student's ability to self-administer epinephrine auto-injectors and the health care provider's statement on their competency.

Food Allergy and Anaphylaxis Description

Food allergy is a distorted response by the immune system to one or more foods that the body identifies as harmful and toxic to the body. Once the ingested food is identified as toxic by the immune system, the immune system produces specific antibodies to that specific food or foods. The immune system response can produce a series of chemical triggers as part of the allergic reaction due to the allergic substance and in some instances can affect the respiratory system, cardiovascular system, skin, and the gastrointestinal tract. Symptoms of the allergic reaction to food may appear in one or several body systems. The signs and symptoms may range from mild to severe and may be life-threatening in some cases, depending on the individual level of dose response and mode of exposure.

Presently there is no cure for food allergy and avoidance is the only method to prevent an allergic reaction. Individuals, particularly children, may have life-threatening allergies to one or many groups of food. Including fish, fruits, vegetables, and meats. Listed below are most of the commonly known foods to cause allergic reaction in some individuals:

- | | |
|---|--------------|
| 1. Peanuts | 4. Eggs |
| 2. Tree nuts (walnuts, cashews, pecans, hazelnuts, almonds, coconuts, pistachios, pine nuts, and brazil nuts) | 5. Fish |
| 3. Cow's milk | 6. Shellfish |
| | 7. Soy |
| | 8. Wheat |

These eight foods are responsible for most food reactions but there are other foods that can cause a serious allergic reaction. Nuts generally cause the most severe allergic reactions, and it is estimated that in the United States approximately 90% of fatal and near-fatal reactions are due to these foods: **peanuts, tree nuts, fish, and shellfish**. In some cases, individuals may have fatal reactions resulting in death if there are no rapid medical interventions.

Signs and Symptoms

Individuals can have an allergic reaction to tactile (touch) exposure or inhalation exposure. It is exceedingly rare for exposure to an allergen via tactile or inhalation to result in severe or life-threatening reactions unless the individual has also ingested the allergen. Exposure by mouth, nose, or eyes is considered to be ingestion and, depending on the dose response of the specific individual, may cause anaphylaxis and trigger an allergic reaction. The level of sensitivity to allergens, types of symptoms, and the severity of symptoms are dependent on the individual and can range from mild to severe, including the potentially life-threatening condition known as **anaphylaxis**.

Mild symptoms may include one or more of the following:

- Hives - reddish, swollen, itchy areas on the skin
- Eczema - a persistent dry, itchy rash
- Redness of the skin or around the eyes
- Itchy mouth or ear canal
- Nausea or vomiting
- Diarrhea
- Stomach pain
- Nasal congestion or a runny nose
- Sneezing
- Slight, dry cough
- Odd taste in the mouth

Anaphylaxis is a severe allergic reaction with rapid onset and may cause death. Symptoms occur rapidly after exposure to a likely allergen (minutes to hours) and may include one or more of the following:

- Nausea, vomiting, and diarrhea
- Abdominal pain and cramping
- Skin redness
- Watery eyes
- Throat tightness/closure
- Slurred speech
- Wheezing, abnormal high pitched breathing, difficulty breathing
- Anxiety
- Confusion
- Cough
- Fainting, dizziness, or lightheadedness
- Hives, itching
- Nasal congestion
- Palpitations or tachycardia

Symptoms of an allergic reaction to an insect sting, latex, or medication can appear the same as life-threatening food allergies. Treatment of these serious allergic reactions should be the same, and the use of anaphylaxis management should be encouraged even if there are no signed medical provider statements specific to the individual at risk. It is imperative that the emergency medical system (EMS) is activated (dial 911) immediately and stock epinephrine be administered if available.

Treatment

No treatment exists to prevent reactions to food allergies or anaphylaxis. Strict avoidance of the food allergen is the only way to prevent a reaction. However, avoidance is not always easy or possible, and staff in schools must be prepared to deal with allergic reactions, including anaphylaxis. Early and quick recognition and treatment of allergic reactions that may lead to anaphylaxis can prevent serious health problems or death.

- Mild to moderate symptoms (e.g., itching, sneezing, hives, and rashes) are often treated with antihistamines and oral or topical steroids.
- For students at risk of experiencing a severe reaction (anaphylaxis), epinephrine is prescribed. Epinephrine, also called adrenaline, is naturally produced by the body. When given by injection, it rapidly improves breathing, increases heart rate, and reduces swelling of the face, lips, and throat. Epinephrine is the only medication that can reverse the symptoms of anaphylaxis. It is available in an auto-injector (Auvi-Q™, EpiPen® or Adrenaclick®).

Food Allergy and Anaphylaxis: Care of Student

Each student with a diagnosis of a life-threatening allergy should have an Individual Health Care Plan (IHP) in place with an Allergy Action Plan. It should include the student photo if available, specific offending allergen of reaction and names of the trained staff responsible for administering epinephrine based on the order from the doctor for that specific student.

Roles and Responsibilities for Management of Food Allergies

An effective Individual Health Care Plan (IHP) will include an Allergy Action Plan and requires the cooperation of designated school personnel who are knowledgeable and trained regarding the management of students with life-threatening food allergies. Staff who may be present in the event of an anaphylactic reaction should be prepared for their responsibilities prior to the emergency. The food allergy management team should include, but is not limited to, the student, school nurse (RN), parents, administrators, teachers, counselors, food service directors and personnel, bus/transportation staff, coaches and/or extracurricular advisors. The school nurse (RN) shall meet with the team annually as a group, but he or she may also meet separately with staff members to ensure their competency in emergency response procedures, Responsibilities are shared among all partners to assist the child in food avoidance when there are known allergies.

Student with Life-Threatening Allergies

- Learn to recognize symptoms and take them seriously in the early stages
- Take as much responsibility for avoiding allergens as possible, based on developmental level, including participation in planning the Allergy Action Plan.
- Learn to read food labels
- Wearing a medical alert identification tag while in school is strongly advised
- Trading or sharing food is prohibited
- Wash hands before and after eating
- Promptly inform all adult if he/she suspects exposure to an allergen
- Develop trusting friendships with peers and ask them for help if needed
- Report teasing or harassment immediately
- Carry own epinephrine auto-injectors and demonstrate competency if age appropriate
- If permitted by school authorities and parents, carry a cell phone for emergency use only (middle and high school students)
 - Cell phones should not take the place of notifying school personnel

Parent/Guardian

- Inform the school nurse and administrators of your child's allergies prior to the opening of school or as soon as possible after diagnosis. Explain what he or she is allergic to, triggers, warning signs of allergic reaction and emotional responses of your child.
- Participate in team meetings and development of the IHP and communicate with individual school personnel who will be in contact with your child.
- Provide the school with emergency contact information (cell phone number, work number, etc.) and designate someone to act on your behalf if you are unavailable.
- Provide a list of foods and ingredients that the child should avoid, as recommended by their health care provider or observed by the parent.

- Provide the school nurse with medication orders from a health care provider, permission to consult with the provider, and signed consent forms to administer medications and share health information on a need-to-know basis.
- Provide the school with up-to-date epinephrine auto-injectors (two auto-injectors are recommended) to be stored in secure unlocked locations according to school policy. It is not the school's responsibility to furnish epinephrine auto-injectors for students.
- Communicate with schools regarding necessary accommodations for school field trips or off-site school-sponsored events.
- Provide the school with updates on the child's allergy status annually and as needed.
- Providing a medical alert identification tag for your child is strongly advised.
- Advocate for your child regarding the seriousness of allergies and encourage your child to take more responsibility as he/she grows older.

School Nurse - RN

- Introduce yourself to the student and orient him/her how to access the nurse and allergy medication if applicable.
- At the beginning of the school year, meet with the parent of the student with life-threatening allergies or as soon as possible after diagnosis.
- Obtain and maintain a current knowledge base and update skills and abilities related to the medical management of food allergies in the school-age population.
- Arrange and convene a food allergy management team meeting to plan and review IHP with special attention to the Allergy Action Plan; encourage parental participation.
- Assure that the IHP with the Allergy Action Plan includes the student's name, photo if available, allergens, and symptoms of allergic reaction, risk reduction procedures, emergency responses, and required signatures. Monitor that it is filed in the cafeteria and classroom.
- Regularly review and update the IHP whenever there is a change in medical management or the student's response to care.
- Establish and maintain a working relationship with the student's parent/guardians and health care provider and act as a liaison between the student's authorized health care provider and the school.
- Document attempts to collaborate with parents who have not participated in the development of the IHP or fail to supply Epinephrine auto-injectors (letters or phone calls – consequences of lack of cooperation per LEA policy).
- Familiarize assigned school personnel with the Allergy Action Plan on a need-to-know basis.
- Coordinate or conduct in-service training and education for appropriate staff per LEA policy.
- Implement a periodic anaphylaxis drill with the assistance of the school administrator based on LEA policy.
- Make sure there is a contingency plan for a substitute school nurse.
- File location of epinephrine auto-injectors in the main office, health clinic, food service area and with all assigned teachers. Check expiration dates and stock up supply per LEA policy.
- Request a functioning communication device in the health clinic (e.g., phone system, intercom, or two-way radios).
- Serve as the student's advocate.
- Respect the student's confidentiality and right to privacy.

School Administrator

- Participate in planning the IHP with an attached Allergy Action Plan as a member of the allergy management team, and support school personnel, the student and parents in its implementation.
- Include in the school's emergency response plan a written plan outlining emergency procedures for managing life-threatening allergic reactions.
- Include district health professional in the development and reviews of health policies and emergency protocols for the LEAs.
- Monitor overall compliance with the implementation of the Allergy Action Plan.
- Recommend that communication devices are provided and are in functioning condition in the appropriate locations – nurse's clinic, classroom, cafeteria, etc.
- If the school system chooses to have epinephrine on hand for students having a life-threatening or anaphylactic reaction for the first time or when the student's personal auto-injector is not available, pursuant to T.C.A. § **49-50-1602**, the school must develop a protocol for administration of epinephrine.
- Require the completion and documentation of training and education of all involved personnel as set forth in T.C.A. § **49-50-1602(f)**.
- Inform parent/guardian if their student experiences an allergic reaction at school.
- Monitor strategies to reduce the risk of exposure.
- Communicate in advance with the school nurse when a field trip or off-site school-sponsored event or class party might require additional planning.
- Provide adequate time for the school nurse to train school personnel who volunteer.

Educational Personnel (Teachers, Aides, Coaches, Etc.)

- Participate in team meetings for the student with life-threatening allergies.
- Be aware of the signs and symptoms of an allergic reaction and follow planned procedures outlined in the Emergency Response Plan.
- Be sure that volunteers, student teachers, aides, specialists and substitute teachers are informed of the student's food allergies and necessary safeguards on a need-to-know basis.
- Request that the classroom has a functioning intercom, two-way radios, or other communication device for communication with the school nurse and administrator.
- Work with the school nurse to educate other parents about the presence and needs of the child with life-threatening allergies on a need-to-know basis and with parental permission. Enlist their help in keeping certain foods out of the classroom.
- Respects the student's right to confidentiality.
- Participate in the planning for student's re-entry to school after an anaphylactic reaction, when possible.
- Inform parents of any special school events where food will be served.
- A student with suspected allergic reaction should **never** be sent to the nurse's clinic, office, or anywhere in the school building alone.
- Request a teacher's aide or assistant based on the student's IHP.
- Establish procedures in the classroom to ensure that the student with life-threatening food allergies eats only what he or she brings from home or is provided by the school following the IHP.
- Prohibit students from sharing or trading snacks.
- Allow time for proper hand washing before and after eating and/or using food products.

- Consider students' allergies when offering incentives and rewards as well as classroom crafting activities.
- Communicate and collaborate in advance with the school nurse about a field trip, off-site school-sponsored event or class party.
- If, for safety reasons, medical alert identification needs to be removed during specific activities, the student should be reminded to replace this identification immediately after the activity is completed.
- Notify substitute teachers of students with allergies and leave a clear plan of care regarding the special needs of the student.
- Keep the student's Allergy Action Plan readily accessible in the classroom in an organized format for substitute teachers and for use in emergency situations.

School Counselor

- While the school counselor and/or social worker may not always have direct contact with the student, they should be aware of the students in their schools who have a food allergy and the potential impact it may have on the student's behavior and performance.
- Communicate with the school nurse as needed in the development of the student's IHP and Allergy Action Plan.
- Monitor anxiety, stress levels, and social development of students with life-threatening allergies and provide interventions as appropriate.
- Act as a resource to parents and students regarding anxiety, stress, and normal development.
- Educate classmates (with parent/guardian and student's permission) to avoid endangering, isolating, stigmatizing or harassing students with food allergies per LEA policy (at a minimum of annually).

Food Service Manager/Personnel

- Set up policies for the cafeteria regarding students with a food allergy.
- Communicate as needed with the school nurse regarding the development of the food Allergy Action Plan.
- File the student's Allergy Action Plan with the consent of parent/guardians.
- Review the legal protections for a student with special health care needs.
- Read all food labels and re-check routinely for potential food allergens.
 - This includes new products as well as items that have a long shelf life.
- Train all food service staff (including monitors) and their substitutes to read product food labels and recognize food allergens.
 - Re-train annually.
- Maintain contact information for manufacturers of food products – consumer hotline.
- Review and follow sound food handling practices to avoid cross-contact with potential food allergens.
- Create specific areas that will be allergen safe, if feasible.
- Enforce strict sanitation with staff using commercial cleaning solutions on tabletops to avoid cross-contact.
- After receiving a doctor's order, make appropriate substitutions or modifications for meals served to students with food allergies; consult with the district food service director as needed.

- Plan ahead to have safe meals for field trips.
- Recommend that food service personnel wear non-latex gloves.
- Provide advance copies of the menu to parents/guardians when feasible.
- Have a functioning communication device to support emergencies.

School Bus Company

- Provide functioning communication devices.
- Know local emergency medical services procedures.
- Recommend that there be no consumption of food on school buses unless medically necessary such as students with diabetes.
- Respect the student's right to confidentiality and privacy.
- Individual LEA's school bus company should consider receiving training on emergency allergy response epinephrine administration and CPR training.

Off-site School Sponsored Event/School Administered Care Programs

- An epinephrine auto-injector must be with the child on all field trips, both long and short trips.
- No student should be excluded from a field trip or any extracurricular program or activity due to the risk of allergen exposure.
- A school must provide the accommodations and services the student needs to partake in the trip.
- A school may only exclude a student from a field trip if the student's participation presents an unacceptable risk to the student's health or safety.
- The parent/guardian of the student should be allowed to accompany their child on the school trip in addition to the school chaperone.
- Unless all parents are required to participate in the field trip, parents/guardians of students with disabilities may not be required to participate in the field trip in order to care for the student.
- As a matter of safe practice, the school may reasonably require that parents supply an extra set of emergency medication (epinephrine auto-injector for availability during extracurricular activities).

Before a field trip or extracurricular activity, the school shall:

- Notify the student's parent/guardian in a timely manner in order to prepare for food/snacks/medications.
- Prohibit sharing or trading food.
- Make certain that an emergency communication device is always present. Minimum of two (2) people with cell phones is recommended.
- Clearly identify who is responsible for keeping the epinephrine auto-injector, first aid kit and other medication along with a copy of the student Allergy Action Plan.
- Have the school nurse assess if it is appropriate for the student to carry his/her own epinephrine auto-injector.
- It is recommended that students and staff use hand wipes before and after eating.
- Maintain records of the names and phone numbers of parent/guardian of the student, the health care provider, and the allergist.

- Be sure that a trained staff person is assigned to stay with the student at all times if the emergency medication has been administered.
- Immediately call an ambulance to transport the student to the nearest hospital when an epinephrine auto-injector is given.
- Designate someone to call the student's parents with the name and location of the hospital.
- Communicate in advance with the school nurse (RN) when a field trip or off-site school sponsored event is planned.
- Train staff in proper separation, storage, and distribution of the children's snacks/lunches.
- Be sure that the bus driver has the emergency route to the hospital if the cell phone cannot make the connection to EMS. Only if EMS cannot be reached should the bus driver take the child to the nearest Emergency Room on the bus.

Food Allergy and Anaphylaxis Medication Administration

T.C.A. § **49-50-1602 (e)** states:

1. A student with anaphylaxis is entitled to possess and self-administer prescription anaphylaxis medication while on school property or at a school-related event or activity if:
 - A. The prescription for anaphylaxis medication has been prescribed for that student as indicated by the prescription label on the medication bottle.
 - B. The self-administration is done in compliance with the prescription or written instructions from the student's physician or other licensed health care provider; and
 - C. A parent of the student provides to the school:
 - i. A written authorization, signed by the parent, for the student to self-administer prescription anaphylaxis medication while on school property or at a school-related event or activity;
 - ii. A written statement, signed by the parent, in which the parent releases the school district and its employees and agents from liability for an injury arising from the student's self-administration of prescription anaphylaxis medication while on school property or at a school-related event or activity, except in cases of wanton or willful misconduct; and
 - iii. A written statement from the student's physician or other licensed health care provider, signed by the physician or provider, that:
 - a) Supports a diagnosis of anaphylaxis;
 - b) Identifies any food or other substances to which the student is allergic;
 - c) Describes any prior history of anaphylaxis, if appropriate;
 - d) Lists any medication prescribed for the child for the treatment of anaphylaxis;
 - e) Details emergency treatment procedures in the event of a reaction;
 - f) Assesses the student's readiness for self-administration of prescription medication; and
 - g) Provides a list of substitute meals that may be offered by school food service personnel.
2. The physician's statement must be kept on file in the office of the school nurse of the school that the student attends or, if there is not a school nurse, in the office of the principal of the school that the student attends.
3. If a student uses the medication in a manner other than prescribed, the student may be subject to disciplinary action under the school codes.

Recommendations for School Districts

- The school district will share pertinent health information with school staff who have a legitimate educational interest in the student.
- A current and updated list of all students who are carrying their own epinephrine should be placed in the nurse's office.
- Provide information about students with life-threatening allergies and their photos (if consent is given by parent) to all staff on a need-to-know basis (including bus drivers).
- The school system shall maintain and make available a list of those school personnel authorized and trained to administer epinephrine by auto-injector. List of all trained personnel should be filed centrally and immediately available in an emergency.
- Develop a policy on student carrying his or her own epinephrine auto-injector.
- Administration of epinephrine should also be documented in the student's IHP.
- LEA shall develop a policy for carrying and disposal of the sharps.
- Periodically check medications for expiration dates and arrange for them to be updated.
- Review the Allergy Action Plan as described in the IHP, or if a student does not have an IHP, consider initiating one for first-time reaction.

T.C.A. § **49-50-1602(f)(3)**: states that it is the general assembly's intent that schools, both public and non-public, be prepared to treat allergic reaction in the event a student's personal epinephrine auto-injector is not available or the student is having a reaction for the first time. Each school in an LEA and each non-public school is authorized to maintain at the school in at least two (2) unlocked, secure locations, including, but not limited to, the school office and the school cafeteria, epinephrine auto-injectors so that epinephrine may be administered to any student believed to be having a life-threatening allergic or anaphylactic reaction. A physician may prescribe epinephrine auto-injectors in the name of an LEA or non-public school to be maintained for use in schools when necessary. When a student does not have an epinephrine auto-injector or a prescription for an epinephrine auto-injector on file, the school nurse or other trained school personnel may utilize the school supply to respond to an anaphylactic reaction, under a standing protocol from a physician licensed to practice medicine in all its branches.

If applicable, at the beginning of the school year, the school should inform parents of its election to maintain epinephrine auto-injectors for use in emergencies. The district's standing protocol is to be followed in those circumstances.

If a student is injured or harmed due to the administration of epinephrine:

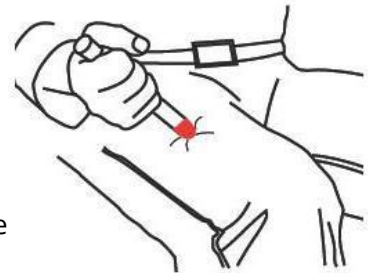
- The physician will not be held responsible for the injury unless the physician issued the prescription or standing protocol with intentional disregard for safety.
- The school nurse or other trained school personnel will not be held responsible for the injury unless the school nurse or school employee administered the epinephrine injection with an intentional disregard for safety.

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Epinephrine Auto-Injector Administration

For students at risk of experiencing a severe reaction (anaphylaxis), epinephrine is prescribed. Epinephrine, also called adrenaline, is naturally produced by the body. When given by injection, it rapidly improves breathing, increases heart rate, and reduces swelling of the face, lips, and throat. Epinephrine is the only medication that can reverse the symptoms of anaphylaxis. However, it must be administered promptly during anaphylaxis to be most effective. Delayed use of epinephrine during an anaphylactic reaction has been associated with deaths. It is available in an auto-injector (Auvi-Q™, EpiPen®, and Adrenaclick®).

- Timely Accessibility:
 - Epinephrine by auto-injector should be readily accessible and secure at all times during school hours. It may be carried by the student if appropriate.
 - To promote rapid life-saving steps, emergency medication should be in accessible and “unlocked, secure locations” that can be properly supervised by a nurse or other authorized and trained staff member. Key staff members, such as the teacher, principal, and cafeteria staff, should know where the auto-injector is stored even if they are not trained to administer it.
 - All staff trained in the use of epinephrine should know exactly where it is located.
 - Identification of the place where the epinephrine is to be stored is selected after considering where students may be most at risk of anaphylaxis and where the school can provide ready and secure access. The epinephrine may be stored at more than one location. The location of the auto-injector and the backup should be written in the student’s health care plan.
- Instruction and Care:
 - Should only be injected into the anterolateral aspect of the thigh (outer thigh). **Do not inject into the buttock.**
 - Do not expose the epinephrine auto-injector to direct sunlight.
 - Store the epinephrine auto-injector in its original packaging.
 - Keep the epinephrine auto-injector at room temperature (do not refrigerate).
 - Do not store in a vehicle during hot weather or extreme cold.
 - Make sure the solution is clear and colorless. If it is brown or has a precipitate, replace with a new unit.
 - Give your used epinephrine auto-injector to a healthcare worker for proper disposal. Do not throw away in a regular trash can. **(Dispose of it per your LEA policy.)**
 - Accidental injection of epinephrine into the hands or feet may result in a loss of blood flow to the affected area. **If this occurs, immediately go to the nearest emergency room for treatment.**



Available Epinephrine Auto-Injectors

There are a number of epinephrine auto-injectors that have been approved by the FDA and are available, with a prescription. The devices operate in different ways, so it is important to be properly trained to use the device. Below is a list of the devices currently on the market, links to important information about each product, and training videos on how to use them.

Auvi-Q™

It has a retractable needle system and a red safety guard located at the same end as the needle. Activation of the device by removing the outer case initiates an audio voice recording that provides step-by-step instructions and a five-second countdown during the injection.

Click [here](#) for detailed information about Auvi-Q.



EpiPen



A disposable, pre-filled automatic injection device used to treat life-threatening, allergic emergencies including anaphylaxis. EpiPen contains a single dose of epinephrine.

For additional information about EpiPens, click [here](#).

Adrenallick®

An automatic injection device designed for self-administration delivering one dose of epinephrine. The press and hold technique: press hard, hold in the middle of the outer side of the thigh (upper leg) for 10 seconds - is designed to deliver the full dose of epinephrine.

For additional information about Adrenallick, click [here](#).



When giving Epinephrine:

- **It is very important when giving epinephrine that the emergency medical system (911) be called and the student transported to the nearest hospital emergency room.** Even if the symptoms appear to be resolved, the effect of the injection begins to wear off after 10 to 20 minutes or sooner. Remember to call immediately for further evaluation and treatment. If symptoms recur, use the second epinephrine auto-injector in the twin pack. This may be used as soon as 5 minutes after the first injection.
- In the event an allergic reaction occurs where there is no known allergic history (first-time reaction), the staff should call the school nurse and activate the School Emergency Allergy Response Plan. The emergency medical service should be called immediately (911).

Food Allergy and Anaphylaxis Training

T.C.A. § 49-50-1602(f)(1) states that guidelines should include education and training for school personnel on the management of students with life-threatening food allergies, including training related to the administration of medication with a cartridge injector.

Some health care professionals may have little expertise in anaphylaxis education and/or management but provide support to students with allergies. Licensed health care professionals employed or contracted by an LEA who will be providing care to a student with known allergies should demonstrate competency for both knowledge and skills on an annual basis.

Suggested Strategy

A strategy for training provided by the National Association of school nurses (NASN) is to offer different levels of training. For example:

- Level 1: General training for all school personnel. This training would be required of all school personnel who need to understand the basics in food allergy education, who will be interacting with students with food allergies, and who may be called to assist others in responding to food allergy-related emergencies.
- Level 2: In-depth training for personnel with frequent contact with a student with food allergies. This training would be required for classroom teachers, physical education teachers, coaches, bus drivers, and food service personnel. Level 2 content should include level 1 strategies.
- Level 3: Specialized training for individuals responsible for the daily medical management of students with food allergies. This training should be required for the school nurse, district nurse, school physician, and health advocate or health consultant. Level 3 content should include level 1 and 2 strategies.

Suggested Components for Training Curriculum:

- Provide an overview of food allergies.
- Review signs and symptoms of food allergy and anaphylaxis.
- Explain medications for food allergy and anaphylaxis.
- Discuss best practices for preventing exposure to food allergens.
- Review policies on bullying of and discrimination against students with food allergies.
- Delineate communication process during medical emergencies including who to contact for help in an emergency.
- Provide FERPA privacy and confidentiality and legal rights of students with food allergies.
- Provide guidance for the staff team accountable for the student specific Food Allergy

Action/Emergency Care Plan.

- Review preventing exposure to allergens.
- Discuss school-wide staff response to allergen exposure or symptoms of anaphylaxis.
- Train and evaluate staff detection of symptoms of anaphylaxis.
- Train, practice, and evaluate staff administration of epinephrine auto-injector.
- Train, practice, and evaluate staff in activating emergency care plan in case of a food allergy emergency.
- Document training and evaluation of training.
- Periodically provide training updates as needed.
- Provide background on the importance of partnering with parents.
- Discuss the need to investigate local emergency medical services carrying epinephrine.
- Describe the team approach for preventing exposures and responding to emergencies, including identifying the school personnel team needed to support the food allergic student.
- Educate regarding legal issues related to students with food allergies.
- Reinforce the need for ongoing evaluation and documentation of emergency response and staff competence in responding to food allergy emergencies, including debriefing following an exposure or epinephrine administration.

Suggested Training Resources:

1. **[Get Trained](#)** © is a program intended to be used as a tool and resource for scripted training of unlicensed school staff to administer epinephrine via an auto-injector during an anaphylactic emergency. The program recommendations and content are based on best practices. Each school nurse must exercise independent professional judgment when practicing and conducting training. Because nurse practice acts differ from state to state, each school nurse must ensure before presenting the training that it is consistent with applicable state laws and regulations, including those governing delegations, as well as applicable school district policies and procedure.
2. **NASN Food Allergy and Anaphylaxis Tool Kit**
The Centers for Disease Control has worked with NASN, the Food Allergy & Anaphylaxis Network and the National School Boards Association to develop comprehensive guidance and resources for food allergy and anaphylaxis management in the school setting. To access NASN's Food Allergy and Anaphylaxis tool kit, click [here](#).
 - Clinical Conversations for the school nurse – Food Allergy Management in the School Setting. The Clinical Conversation Guide for Food Allergy Management in the School Setting provides the school nursing professional with access to recently published articles in the school health literature to provide a framework for leading a meeting with other school nurses or school health staff, a professional development workshop or an interactive nursing conference presentation based on prepared discussion questions. [Access the Guide](#).
 - Saving Lives at School: Anaphylaxis and Epinephrine
Initiate meaningful conversations with students and parents on topics related to anaphylaxis and epinephrine using NASN's Connections Cards with school nurse Handbook. [Learn more](#).
3. **Safe@School® CD-ROM**
This component of the School Food Allergy program is available for purchase separately and provides resources for school nurses or administrators to conduct in-service training about food allergies and anaphylaxis.
Making a presentation about food allergies in schools will be simplified with the use of this CD,

which also provides talking points for presenters. To learn more about the School Food Allergy program, click [here](#).

4. How to C.A.R.E. for Students with Food Allergies: What Educators Should Know

This is an online course designed to help teachers, administrators, and other school personnel prevent and manage potentially life-threatening allergic reactions. Based on the latest scientific research and expert consensus, the online course enables school personnel the flexibility to complete the program anytime and anywhere that has an Internet connection. It includes step-by-step guides, teaches the use of an epinephrine auto-injector with confidence, and provides a certificate of completion. An enhanced version with site license enables Health and Safety Officers to monitor compliance and track progress. To learn more about the online course for educators, click [here](#).

5. Food Allergy Management & Education (FAME)

FAME is designed to provide schools with the components of a comprehensive school-based food allergy program to promote best practices, offer resources and materials to area schools and families on creating a safe, nurturing educational environment for children with food allergies and increase awareness that children with asthma and food allergies have an increased risk of anaphylaxis which is a rapid, severe allergic reaction. It can cause difficulty breathing, swelling, dizziness, and even death. To learn more about FAME, click [here](#).

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Seizure

T.C.A. § **49-50-1602(g)(1)** states that public and non-public school personnel who volunteer under no duress or pressure and who have been properly trained by a registered nurse employed or contracted by the LEA or governing board for a non-public school may administer abortive anti-seizure medications, including diazepam rectal gel, to a student in an emergency situation based on that student's IHP; however, if a school nurse is available, on site, and able to reach the student within the time limit for administration specified in the IHP, then the nurse shall provide this service to the student.

According to the [National Epilepsy Foundation](http://www.epilepsy.com) (www.epilepsy.com) about 300,000 American children under the age of 15 have epilepsy and 200,000 new cases of epilepsy are diagnosed each year. Often the cause for seizures is not apparent. Due to such a high incidence of seizure activity, most schools will have one or more students who may need care for a seizure problem at school. An LEA shall not assign a student with epilepsy or other seizure disorder to a school other than the school for which the student is zoned or would otherwise regularly attend because the student has a seizure disorder.

With the availability of an effective medication which may rapidly stop a seizure, it is important that provisions are made to provide this medication when a nurse is not available at school. Therefore, the purpose of T.C.A. § **49-50-1602** is to allow school districts to develop and implement an Emergency Seizure Response Plan that includes training school staff in the recognition of seizure activity and the administration of abortive anti-seizure medication in the school setting.

Using this document as a guide, each school district must develop processes to identify students with seizure conditions that would require diazepam rectal gel. It is important to note that not all students with seizure disorders have seizures that are aborted with diazepam rectal gel. There are some epilepsy patients that use different emergency anti-seizure medications. While these guidelines specifically address using diazepam rectal gel, they could also be used to develop an Emergency Seizure Response Plan for other anti-seizure medications.

Trained volunteer school personnel administering emergency anti-seizure medications under subsection **49-50-1602(g)(6)**, any registered nurse who provides training to administer such medications and any local board of education or governing board for a non-public school authorizing the same shall not be liable in any court of law for injury resulting from the reasonable and prudent assistance in the administration of such medications, if performed pursuant to the policies and guidelines developed by the Departments of Education and Health and approved by applicable regulatory or governing boards or agencies.

Once a child with a seizure disorder is identified and parents express the desire to have diazepam rectal gel available at school, pursuant to T.C.A. § **49-50-1602 (g)(2)**, a registered nurse employed or contracted by the LEA shall be responsible for developing, updating and maintaining an Individualized Health Care Plan (IHP) for each student outlining the response plan for that individual child.

The following information is essential in the development of an IHP for a student diagnosed with epilepsy/seizure disorder:

- All medical diagnoses that may impact medication administration
- Known allergies to food or medication
- Specific seizure history
- Specific type(s) of seizure(s)

- Information on the student's response to any previous administration of emergency anti-seizure medication
- The frequency of seizure activity
- Description of usual type of seizure activity
- The usual duration of seizure activity
- Description of usual post-seizure activity and plan
- Medications, especially the ones that may potentiate emergency anti-seizure
- Previous medication history
- Requirements for reporting administration of emergency anti-seizure medication, prescription medication or over-the-counter medicines that are administered when the student is not present at school. Such notification shall be given after administration of medication, before or at the beginning of the next school day in which the student is in attendance.

Emergency Seizure Response Plan

Convulsive seizures in a child who has epilepsy may not be a medical emergency as most seizures are self-limited. However, the following situations require immediate medical attention:

- A child has a seizure and there is no known history of epilepsy. Some other medical problem might be causing the seizure, and emergency treatment of that problem might be required.
- Consciousness and/or baseline level of responsiveness does not return within 10 minutes after the seizure ends.
- A second seizure begins shortly after the first one without regaining consciousness in between the seizures.
- The seizure shows no sign of ending after 5 minutes.

If a child hits his/her head with force, either during the seizure or just before it began, and if one or more of the following signs is noted, call for immediate medical attention:

- Difficulty in arousing
- Altered responsiveness and/or confusion from the child's baseline cognitive level
- Vomiting
- Complaints of difficulty with vision
- Persistent headache after a short rest period
- Unconsciousness with failure to respond
- Unequal size of pupils
- If a seizure occurs in water

During Seizure Activity

- **Stay with the child!**
- If falling or generalized jerking occurs:
 - Place child on the floor
 - Gently support head to side position and monitor breathing and pulse
 - Do **NOT** restrain the child
 - Do **NOT** try to place anything in child's mouth or between child's teeth, including your finger
 - Protect the child by moving items away that may cause injury – e.g., desks, chairs
 - Loosen clothing at neck and waist; remove eyeglasses, if applicable
 - Have another classroom adult remove/direct students from the area

- Use a watch to **TIME THE SEIZURE**. Observe the pattern of the seizure and be prepared to describe it.
- **CALL 911 if:**
 - The absence of breathing and/or pulse (start CPR)
 - Seizure of 5 minutes or greater duration – follow specific time restrictions on provider order
 - Two or more consecutive (without a period of baseline consciousness between) seizures which total 5 minutes or greater
 - No previous history of seizure activity
 - Continued unusually pale or bluish skin/lips or noisy breathing after the seizure has stopped which could indicate respiratory distress or respiratory depression
 - Emergency anti-seizure medication is administered or is needed

After Seizure Activity

1. Reorient and reassure the child
 - a. Allow/assist the child with changing into clean clothing if necessary
 - b. Allow the child to sleep, as desired, after the seizure
 - c. Allow the child to eat, as desired, once fully alert and oriented
2. A child recovering from a generalized convulsive seizure may manifest abnormal behavior such as incoherent speech, extreme restlessness, and confusion that may last from five minutes to hours.
3. Inform parent/guardian immediately of seizure by telephone if:
 - a. The seizure is different from the usual type/frequency that has not occurred at school in the past month.
 - b. The seizure meets criteria for 911 emergency call.
 - c. The child has not returned to “normal self” after 30/60 minutes.
 - d. Parent/Guardian request in writing to be notified of seizure activity.
4. It is the parent/guardian’s responsibility to determine follow-up care with a health care provider for symptoms.

Seizure Description

A seizure happens when the electrical system of the brain malfunctions. Normally the brain sends small electrical impulses from nerve cell to nerve cell to communicate and process information that controls our day to day bodily functions and activities. The best way to explain what seizures are is to imagine abnormal electrical impulses firing rapidly in one or more parts of the brain. These rapidly firing impulses disrupt the normal electrical operations of the brain and result in altered levels of consciousness, altered sensations, and possibly unusual muscle contractions causing parts of the body to stiffen and convulse.

If only part of the brain is affected, it may cloud awareness, block normal communication, and produce a variety of undirected, uncontrolled, unorganized movements. Most seizures last only a minute or two, although confusion afterward may last longer. An epilepsy syndrome is defined by a collection of similar factors, such as the type of seizure, when they developed in life, and response to treatment.

Under certain conditions, such as a reaction to medication or during pregnancy, anyone can have a seizure. Seizures are also common when a child has a rapidly rising fever (febrile seizures) or when a student with diabetes has severely low blood sugar. The majority of seizures are self-limited and resolve within a few minutes. When convulsive seizures continue for over five minutes, they are considered a medical emergency and require treatment to stop them.

Types of Seizures

There are many different kinds of seizures, and they do not cause the same symptoms and behaviors. People may experience just one type or more than one. The kind of seizure a person has depends on which part and how much of the brain is affected by the electrical disturbance that produces seizures. Experts divide seizures into generalized seizures (absence, atonic, tonic-clonic, myoclonic) and focal seizures (with or without loss of awareness).

What most people think of when they think of a seizure is what is known as a generalized tonic-clonic seizure. These used to be called grand mal seizures but are now classified by the symptoms present during the seizure. Generalized tonic-clonic type seizures are characterized by unresponsive sudden stiffening of the entire body followed by arrhythmic contraction and relaxation of certain muscle groups causing the body to jerk. At the other end of the seizure spectrum are absence seizures, formally called petit mal seizures. When someone has an absence seizure the person might appear as if they are staring off into space or like they temporarily “zoned out” for a few seconds.

Classification of Epileptic Seizures

1. Primary Generalized Seizures
 - A. Absence seizures (formerly called petit mal):
 - a. Typical brief episodes of staring, blinking, being unaware of surroundings; usually last less than 10 seconds but may last up to 20 seconds.
 - b. Atypical staring spells lasting between 5 to 30 seconds, eye blinking or slight jerking movement of the lips may occur; partial reduction in responsiveness.
 - B. Myoclonic: Brief jerks of a muscle or group of muscles; usually involving the neck, shoulders, and upper arms.
 - C. Atonic: Sudden loss of muscle strength, eyelids may droop, the head may nod, objects may be dropped, or the child may fall to the ground; these usually last less than 15 seconds, and injury is common, so the child typically needs to wear a helmet.
 - D. Clonic: Rhythmic jerking movements of the arms and legs, may be generalized
 - E. Tonic: Sudden stiffening movements of the body, arms, or legs involving both sides of the body; usually last less than 20 seconds.
 - F. Tonic-Clonic (formerly called grand mal): Convulsive seizures; body briefly stiffens followed by a jerking motion of the arms and legs; loss of consciousness and falls frequently occur, excessive saliva production may be present, possible loss of bowel and bladder control; usually last a couple of minutes; the child is often tired or confused after the seizure and may want to go to sleep.
2. Partial Seizures
 - A. Simple partial (focal seizures)
 - a. With motor symptoms – jerking and stiffening
 - b. With somatosensory symptoms – touch, smell, hearing, taste, and sight
 - c. With autonomic symptoms – heart rate change, internal sensations such as abdominal discomfort which may rise to the throat, nausea, vomiting, borborygmi (sounds of gas moving in the intestines), belching, flatulence
 - d. With psychic symptoms – consciousness not impaired; dreamy state
 - B. Complex Partial Seizures
 - a. Consciousness impaired

- b. Movements of the mouth and face (e.g., lip smacking, chewing, and swallowing movements)
 - c. Movements of the hands and arms (e.g., fumbling, picking, and tapping movements)
 - d. Vocalizations (e.g., grunts or repetition of words or phrases)
3. Seizure Clustering
- a. Repetitive or serial seizures
 - b. Clustering implies that the occurrence of one seizure may influence the probability of a subsequent seizure. The health care provider will give specific details.

Epilepsy

Some people have a condition known as epilepsy in which they have multiple recurrent seizures. The cause for epilepsy is not always known but usually, someone with epilepsy will undergo an evaluation to try and determine the cause for their seizures. Although the symptoms of a seizure may affect any part of the body, the electrical events that produce the symptoms occur in the brain. The location of that event, the extent of its reach with the tissue of the brain, and how long it lasts all have profound effects. Once they are determined to have epilepsy, treatment is usually initiated with medication, diet, special devices, or even surgery to treat the problem.

Classifying epilepsy by seizure type alone leaves out other important information about the patient and the episodes themselves. Classifying into syndromes takes a number of characteristics into account, including the type of seizure; typical EEG recordings; clinical features such as behavior during the seizure; the expected course of the disorder; precipitating features; expected response to treatment; and genetic factors.

Causes of Epilepsy

A child's brain contains billions of nerve cells. They communicate with each other through tiny electrical charges that fire on and off in a coordinated fashion. When some or all of these cells suddenly begin to fire in a disorganized manner, a wave of electrical energy sweeps through the brain, causing a seizure.

Seizures are symptoms of abnormal brain function. With the exception of very young children and the elderly, the cause of the abnormal brain function is usually not identifiable. In about seven out of ten people with epilepsy, no cause can be found. Among the rest, the cause may be any one of a number of things that can make a difference in the way the brain works. Head injuries or lack of oxygen during birth may damage the delicate electrical system in the brain. Other causes include brain tumors, genetic conditions (such as tuberous sclerosis), lead poisoning, problems in development of the brain before birth, and infections like meningitis or encephalitis.

Seizures interfere with the child's normal brain functions. They produce sudden changes in consciousness, movement, or sensation. Some people use the term "seizure disorder" instead of "epilepsy" to describe this condition. Both mean the same thing - an underlying tendency to experience seizures. Having a single seizure does not mean a child has epilepsy. Epilepsy is the name for seizures that happen more than once without a known treatable cause, such as fever or low blood sugar. While epilepsy can begin at any time, many cases start in early childhood. One reason is that immature brains are more susceptible to seizures from any cause. Pinpointing the cause of epilepsy is difficult at any age. In many cases, there is no known cause and they are labeled as having idiopathic epilepsy. "Idiopathic" is a Latin word meaning "of unknown cause."

Genetic Factors

Epilepsy is a common disorder, and frequently within an extended family, more than one person may have seizures. In most cases, a specific pattern of inheritance of epilepsy within the family cannot be determined. However, there does appear to be a slightly increased risk of epilepsy in close relatives of individuals with seizures compared to the risk in the general population. Sometimes there is a family history of seizures, including febrile (fever-caused) seizures, epilepsy, or seizures in childhood that later went into remission. Absence and juvenile myoclonic epilepsy are two types of epilepsy that tend to run in families and are thought to have a genetic basis. Research is ongoing to find the genetic roots of some forms of epilepsy or the inherited conditions that have seizures as a primary symptom.

Seizure Triggers

Some people who have epilepsy have no special seizure triggers, while others are able to recognize things in their lives that do affect their seizures. Keep in mind, however, that just because two events happen around the same time does not mean that one is the cause of the other. Generally, the most frequent cause of an unexpected seizure is the failure to take anti-seizure medication as prescribed. Other factors include fever/illness, ingested substances, hormone fluctuations, stress, altered sleep patterns, and photosensitivity.

Photosensitive epilepsy is more common in children and adolescents, especially those with generalized epilepsy, in particular, juvenile myoclonic epilepsy. It becomes less frequent with age, with relatively few cases in the mid-twenties. Many people are unaware that they are sensitive to flickering lights or to certain kinds of patterns until they have a seizure. They may never go on to develop epilepsy, which is characterized by recurrent spontaneous seizures, though a seizure may be triggered by certain photic conditions. Many individuals who are disturbed by light exposure experience symptoms such as headache, nausea, and dizziness and do not have seizures.

To help minimize the risk of photosensitive epilepsy with computer monitors:

- Use a flicker-free monitor (LCD display or flat screen)
- Use a monitor glare guard
- Wear non-glare glasses to reduce glare from the screen
- Take frequent breaks from tasks involving the computer

Treatment of Seizures

There are several possible treatment methods to use to control epilepsy including medication, surgery, a special ketogenic diet, or an implanted magnet that can stimulate the vagus nerve when activated. Of these treatments, drug therapy is by far the most commonly used and is usually the first to be tried. A number of medications are currently used in the treatment of epilepsy. These medications control different types of seizures. People who have more than one type of seizure may have to take more than one kind of medication, although physicians try to control seizures with one drug if possible. A seizure preventing drug (also known as an antiepileptic or anticonvulsant drug) will not work properly until it reaches a certain level in the body, and that level has to be maintained. The goal is to keep the blood level high enough to prevent seizures, but not so high that it causes excessive sleepiness or other unpleasant side effects.

However, even with therapeutic levels of anti-seizure medication, sometimes a seizure can still occur. When this happens additional medication is needed to stop the seizure. One such medication that is now commonly used is diazepam (commonly known as Valium™). A special formulation of diazepam has been

developed that can be administered to an unconscious person during a seizure. This special formulation is administered rectally as a gel and is known by the trade name Diastat®. Diazepam rectal gel works to stop seizure activity by acting on brain cell interactions that inhibit the seizure discharges. It is rapidly absorbed from the lining of the rectum and quickly achieves therapeutic levels in the blood. It can be used in both children and adults.

Seizure: Care of Student

The immediate first aid for seizures will be outlined in the IHP/safety plan developed for each child with seizures. Since not all children with seizures have an order for anti-seizure medication at school, it is very important that school staff understand what first aid response is necessary as well as the appropriate after seizure care. Below are the first aid steps to follow for seizures. This information is also included in the seizure safety plan with additional space to customize the plan for each student with a seizure diagnosis.

Roles and Responsibilities for Management of Seizures

Any member of the school staff could be present while a student is having a seizure. The school nurse (RN) should provide training, including the emergency response plan, to all school personnel about the nature of epilepsy and seizure disorder, how to recognize them, and what to do in the event that one occurs. When the only symptoms of a seizure disorder are frequent episodes of blank staring and unresponsiveness, the teacher is often the first adult to notice them. All staff should understand that they should call the school nurse as soon as possible in order to evaluate the student after the seizure has subsided and to determine if any further medical attention is needed. When teachers, students, and school personnel better understand epilepsy, schools are more equipped to provide the best possible environment for students with seizures.

Student with Epilepsy/Seizure Disorders

- Learn to recognize symptoms and take them seriously in the early stages.
- Take as much responsibility for avoiding triggers as possible, based on developmental level.
- If age appropriate, participation in the development of the seizure health plan.
- Promptly inform an adult if he/she is aware of an impending seizure.
- Notify school staff when he/she is not feeling well.
- Develop trusting friendships with peers and ask them for help if needed.
- Report teasing or harassment immediately.
- Wearing a medical alert identification tag while in school is strongly advised.
- Be aware of and follow any restrictions such as swimming/use of playground equipment.

Parent/Guardian

- Inform the school nurse and administrators of your child's medical condition prior to the opening of school or as soon as possible after diagnosis.
- Participate in team meetings and development of the IHP or communicate with individual school personnel who will be in contact with your child.
- Provide the school with emergency contact information (cell phone, work number, beeper) and designate someone to act on your behalf if you are unavailable.
- Provide a written authorization to administer the medication at school with the district's release of liability pursuant to T.C.A. § 49-50-1602.
- Deliver the medication to the school in an original package with the dosage locked in by the dispensing pharmacy with a prescription label affixed with a valid expiration date. While the

parent/guardian is present, the nurse will check to ascertain that the medication is ready to use per the manufacturer's recommendation (i.e., green ready seal is visible for Diastat®); otherwise, the parent/guardian should return medication to the pharmacy for correction.

- Provide and transport to the school all medications, equipment (i.e., protective headgear) and supplies.
- Replace expired medication prior to the expiration date. If not replaced by parent or guardian, then 911 will be called in the event of a seizure based on criteria for use of the emergency anti-seizure medication.
- Understand that the medication order is good for the entire school year unless rescinded in writing.
- Notify the school administrator or school nurse if emergency anti-seizure medication or any new prescription or over-the-counter medication is given outside of school hours by the next school day.
- Provide the school with updates on the child's medical status annually and as needed.
- Providing medical alert identification tag for your child is strongly advised.
- Communicate with schools regarding necessary accommodations for parent participation on school field trips or off-site school-sponsored events.
- When 911 is called for treatment of seizures, it is at the parent or guardian's expense.

School Nurse (RN)

- Introduce yourself to the student and orient him/her how to access the nurse.
- At the beginning of the school year, meet with the parent of the student with a seizure disorder or as soon as possible after diagnosis.
- Obtain and maintain a current knowledge base and update skills and abilities related to the medical management of seizures.
- Organize and facilitate planning meetings with the student's parent/guardian and other key school staff to discuss the planning and implementation of the student's IHP.
- Develop an IHP in cooperation with the student, the parents/guardians, the health care provider, and other school-based staff.
- Regularly review and update the IHP whenever there is a change in medical management or the student's response to care.
- Establish and maintain a working relationship with the student's parent/guardians and health care provider and act as a liaison between the student's authorized health care provider and the school.
- Coordinate or conduct child-specific training to all school-based personnel who will have direct contact with the student on how to respond in an emergency per LEA policy.
- Make sure there is a contingency plan for substitute school nurse (RN).
- Describe the established method of communication for the student/nurse/volunteer/witness to facilitate a rapid response in the event of a seizure.
- Require notification of the administration of emergency anti-seizure medication or over the counter non-prescription medication outside of school hours with instructions to return to the school nurse or school administrator the next school day that student attends.
- Check to verify that the correct dose of medication is ready to use per the manufacturer's recommendation (i.e., green ready seal is visible for Diastat®); otherwise, the parent/guardian should return medication to the pharmacy for correction.
- Identify the location of the medication in the school.
- Identify any specific storage and handling required for the medication.
- Determine the plan for anti-seizure medication that is transported daily to and from school.
- Indicate the specific time frame for the administration of emergency anti-seizure medication intervention.

- School administrator/school nurse shall check monthly, and document, the expiration dates for each anti-seizure emergency medication in possession of the school.
- At least one (1) month prior to the expiration date of each medication, the school nurse or administrator shall inform the student's parent or guardian of the expiration date and the need for replacement medication.
- Request a functioning communication device in the health clinic (e.g., phone system, intercom, or two-way radios).
- Serve as the student's advocate.
- Respect the student's confidentiality and right to privacy.

School Administrator

- Participate in planning the IHP as a member of the management team, and support school personnel, the student and parents in its implementation.
- Include in the school's emergency response plan a written plan outlining emergency procedures for managing seizures.
- Include district health professional in the development and reviews of health policies and emergency protocols for the LEAs.
- Monitor overall compliance with the implementation of the Emergency Response Plan.
- Recommend that communication devices are provided and are in functioning condition in the appropriate location (nurse's clinic, classroom, cafeteria etc.).
- Require that training and education of all involved personnel are completed and documented.
- Inform the parent/guardian if any student experiences a seizure at school.
- School administrator/school nurse shall check monthly, and document, the expiration dates for each anti-seizure emergency medication in possession of the school.
- At least one (1) month prior to the expiration date of each medication, the school nurse or administrator shall inform the student's parent or guardian of the expiration date and the need for replacement medication.
- Communicate in advance with the school nurse to review field trip plans and emergency care.
- Provide adequate time for the school nurse to train school personnel who volunteer.

Educational Personnel (Teachers, Aides, Coaches Etc.)

- Participate in team meetings for the student with epilepsy/seizure disorders.
- Be aware of signs and symptoms of a seizure and to follow the planned procedure during and after a seizure as described in the Emergency Response Plan.
- Be sure volunteers, student teachers, aides, specialists and substitute teachers are informed of the student's diagnosis and necessary safeguards on a need-to-know basis.
- Request that the classroom has a functioning intercom, two-way radios, or other communication device for communication with the school nurse and administrator.
- Work with the school nurse to educate other parents about the presence and needs of the child with epilepsy/seizure disorders on a need to know basis and with parent's permission.
- Respect the student's right to confidentiality and privacy.
- Participate in the planning for student's re-entry to school after a seizure has occurred, when possible.
- Communicate and collaborate in advance with the school nurse to review field trip plans and emergency care.
- If for safety reasons, medical alert identification needs to be removed during specific activities, the student should be reminded to replace this identification immediately after the activity is completed.

- Notify substitute teachers of students with epilepsy/seizure disorders and leave a clear plan of care regarding the special needs of the student.
- Keep the student's Emergency Response Plan for Seizures readily accessible in the classroom in an organized format for substitute teachers and for use in emergencies.

School Counselor

- While the school counselor and/or social worker may not always have direct contact with the student, they should be aware of the students in their schools who have a seizure disorder and the potential impact it may have on the student's behavior and performance.
- Communicate with the school nurse (RN) as needed in the development of the student's IHP.
- Monitor anxiety, stress levels, and social development of students with seizure disorders and provide interventions as appropriate.
- Act as a resource to parents and students regarding anxiety, stress and normal development.
- Educate classmates to avoid endangering, isolating, stigmatizing, or harassing students with epilepsy/seizure disorders (with parental and student's permission) per LEA policy (at a minimum annually).
- When an episode of automatic behavior or a convulsion occurs in the classroom, the whole class is affected. Provide interventions as appropriate.

Food Service Manager/Personnel

- Be aware of special dietary requirements (e.g., ketogenic diet).
- Be able to identify the signs and symptoms of student distress.
- Should be knowledgeable about the activation of emergency services.
- Have a functioning communication device to support emergencies.

School Bus Company

- Provide functioning communication devices.
- Know local emergency medical services procedures.
- Respect the student's right to confidentiality and privacy.
- Individual LEA's school bus company should consider receiving CPR training.

Off-site School Sponsored Event/School Administered Care Programs

- No student should be excluded from a field trip or any extracurricular program or activity due to seizure disorders. Instead, a school must provide the accommodations and services the student needs to partake in the trip. A school may only exclude from a field trip if the student's participation presents an unacceptable risk to the student's health or safety. The parent of the student should be allowed to accompany their child on the school trip in addition to the school chaperone. Unless all parents are required to participate in the field trip, parent of students with disabilities may not be required to participate in the field trip in order to care for the student are not required to attend the trip.
- The teacher requesting/organizing the field trip will coordinate with the principal, school nurse or designee to meet the student's health care needs.
- As a matter of safe practice, the school may reasonably require that parents supply an extra set of emergency anti-seizure medication for availability during extracurricular activities.

Before a field trip or extracurricular activity, the school shall:

- Notify the parent(s) of the student with epilepsy/seizure disorders in a timely manner in order to prepare for medications.
- Plan activities that take into account students with epilepsy/seizure disorders who are participating.
- Train participating school staff in emergency responses relative to student's needs to include administration of student's emergency medications.
- Make certain that an emergency communication device is always present. Minimum of two (2) people with cell phones is recommended.
- Maintain records of the names and phone numbers of parent/guardian of the student and the health care provider.
- Designate someone to call the student's parents with the name and location of the hospital.
- Be sure that the bus driver has the emergency route to the hospital if the cell phone cannot make the connection to EMS. Only if EMS cannot be reached should the bus driver take the child to the nearest Emergency Room on the bus.

Seizure Medication Administration

T.C.A. § 49-6-1602 (g) addresses the administration of anti-seizure medications in school settings in emergency situations. This statute establishes procedures for all LEAs and the governing boards of non-public schools that choose to allow volunteer school personnel to administer anti-seizure medication.

- School personnel in both public and non-public schools who volunteer under no duress or pressure and who have been properly trained by a registered nurse employed or contracted by the LEA or governing board for a non-public school may administer emergency anti-seizure medications, including diazepam gel, to a student in an emergency situation based on that student's Individualized Health Plan (IHP).
- At least one (1) school employee is to serve as a witness on any occasion a volunteer administers emergency anti-seizure medication during an emergency situation, unless a witness is not available within the time limit for administration specified in the IHP.
- Training shall be conducted as soon as volunteer staff has been determined, and shall be repeated annually thereafter. In addition, competencies to administer emergency anti-seizure medications shall be documented in the personnel file of all volunteer school personnel.
- All volunteers trained to administer emergency anti-seizure medications shall also be trained in cardiopulmonary resuscitation (CPR) consistent with guidelines of the American Heart Association prior to anti-seizure medication training.
- When a trained volunteer determines the administration of diazepam gel is necessary, school officials shall immediately summon local emergency medical services to the school to provide necessary monitoring or transport to safeguard the health and condition of the student.
- Trained volunteer school personnel administering anti-seizure medications, any registered nurse who provides training to administer such medications and any local board of education or governing board for a non-public school authorizing the same shall not be liable in any court of law for injury resulting from the reasonable and prudent assistance in the administration of such medications, if performed pursuant to the policies and guidelines developed by the Departments of Health and Education and approved by applicable regulatory or governing boards or agencies.

Prior to the administration of any emergency anti-seizure medication by a volunteer or a school nurse, it is essential that the proper documentation is in place and the appropriate forms are correctly completed and authorized. Each LEA currently has proprietary medication administration forms that are used in their

district for the authorization of medication at school. These forms can still be used by school districts as their written authorization to administer anti-seizure medication including diazepam rectal gel.

The student's parent or guardian shall provide:

- A written authorization to administer the medication at school.
- A written statement from the student's health care practitioner that includes the following information:
 - the student's name
 - name and purpose of the medication
 - prescribed dosage
 - route of administration
 - the frequency that the medication may be administered
 - detailed circumstances under which the medication may be administered
 - a list of other medications the student is taking, with emphasis on any medication that could increase or change the effects of diazepam

The written authorization to administer emergency anti-seizure medication shall be kept on file in the office of the school nurse or school administrator. Unless subsequently rescinded in writing, such authorization shall be effective for the entirety of the school year in which it is granted. New authorization **must** be obtained each school year.

The completed medication administration form must be supplied to the school by the child's parent or guardian along with the medication prescribed. The prescribed medication must be in the original package with the dosage locked in by the dispensing pharmacy with a prescription label affixed with a valid expiration date.

A student's parent or guardian, who has given the student's school written authorization to administer emergency anti-seizure medication, shall, in accordance with the student's IHP, notify the school administrator or school nurse if emergency anti-seizure medication or prescription or over-the-counter medicines are administered to the student at a time at which the student is not present at school.

Diazepam Gel Administration

Diazepam is a benzodiazepine class medication (Valium™) used to stop prolonged seizures. In the rectal gel preparation, it is more convenient to administer to patients who cannot swallow during or after seizures. It is supplied in a syringe-like container and has a small plastic applicator tip that is inserted just inside the rectum. The dose is predetermined by the child's age and weight and is delivered in preset dosages.

The most common side effect of diazepam is sedation. This sedation is more likely to occur at higher dosages or if the medication has previously been given within the past eight hours. **Therefore it is critical for school personnel to know about same day use of diazepam prior to school. Diazepam rectal gel is not to be used more than 5 times a month and/or more than once in 5 days.** It is also important for school personnel to be informed by the health care provider of any interactions between diazepam rectal gel and other medication the student may be taking that could possibly potentiate the sedative effect. The dosage will be predetermined by the child's health care provider and that specific dose will be loaded into the delivery container (i.e., Diastat® AcuDial™) and locked by the pharmacy. It is not necessary for school personnel to calculate the dose to be administered at school.

Prior to Administration:

Ensure that the following is in place prior to the procedure being performed in school:

- Medication Authorization form completed by the health care provider and signed by a parent
 - Must include indications/contraindications and follow-up plan
- Individualized Health Plan (IHP), 504 Plan, Emergency Care Plan (ECP), or Individualized Education Plan (IEP)
- Rectal diazepam medication should be stored in a secure and readily accessible place at school.
 - A separate dose of the medication can be kept at the school at all times to avoid the possibility of leaving the medication at home when the device is transported back and forth each day. If this is not possible, other plans for storage and transport of medication will be outlined in the child's IHP and/or ECP.
- Volunteer(s) trained to administer rectal diazepam must have current certification in CPR.
- Instructions and health care provider's orders for rectal diazepam administration will be in the IHP and/or ECP in a predetermined location along with supplies necessary for administration and communication with EMS/parent.
- Knowledge by the nurse and/or properly trained volunteer on what type of seizure activity this medication is to be administered for and how many minutes into the seizure it is to be given, as described by the health care provider.
- Document the expiration date and ensure that protective cap with the seal pin intact
- Rectal diazepam orders must include the following information:
 - Duration and type of seizure activity before rectal diazepam is administered. Volunteers must be trained by a registered nurse on exact conditions when to treat with rectal diazepam per health care provider's order.
 - Any contraindications to the rectal diazepam (e.g., fever, respiratory infections, etc.).
 - Exact dose of the drug.
- School nurse, or the volunteer in lieu of nurse, must verify the dosage received matches the healthcare provider's order and document this on the Medication Log.
- **Always call 911 and communicate the following:**
 - Time of seizure onset
 - Description of seizure activity
 - Time seizure ended
 - Time rectal diazepam dosage given
 - Who administered rectal diazepam

Steps for Administering Diazepam Rectal Gel:

1. Put student on their side where they can't fall
2. Get the medication
3. Get Syringe. Note: seal pin is attached to the cap
4. Push up with thumb and pull to remove the cap from the syringe. Be sure seal pin is removed with the cap
5. Lubricate rectal tip with lubricating jelly
6. Turn the person on their side facing you and remove clothing
7. Bend upper leg forward to expose rectum
8. Separate buttocks to expose rectum
9. Gently insert syringe tip into the rectum. Note: The rim should be snug against rectal opening.
10. Slowly count out loud to three while gently pushing plunger in until it stops
11. Slowly count out loud to three before removing syringe from rectum

12. Slowly count out loud to three while holding buttocks together to prevent leakage
13. Keep person on the side facing you, note time given, and continue to observe

Seizure Training

T.C.A. § 49-50-1602(g)(4) provides that once a public or private school has determined to allow volunteer staff to administer anti-seizure medication in an emergency situation, the training referenced in subdivision (g)(3) shall be conducted as soon as possible, and shall be repeated annually thereafter. In addition, competencies to administer anti-seizure medications shall be documented in the personnel file of all volunteer school personnel. All volunteers trained to administer anti-seizure medications shall also be trained in cardiopulmonary resuscitation (CPR).

Some health care professionals may have little expertise in seizure education and/or management but provide support to a student with a seizure disorder. Licensed health care professionals employed or contracted by an LEA who will be providing care to a student with a seizure disorder should demonstrate competency for both knowledge and skills on an annual basis.

The curriculum for training includes:

1. General education about seizures and epilepsy
2. The recognition of prolonged seizure activity requiring intervention
3. Immediate first aid techniques including cardiopulmonary resuscitation (CPR) for the management of seizures
4. Protocol and proper technique for the administration of emergency anti-seizure medication
5. Appropriate post-seizure aftercare

If an LEA chooses to allow school personnel volunteers to be trained to administer emergency anti-seizure medication in an emergency situation:

- School personnel who volunteer under no duress will be trained in the administration of an emergency anti-seizure medication.
- Cardiopulmonary resuscitation (CPR), consistent with guidelines of the American Heart Association, will be taught to any school personnel volunteer prior to receiving emergency anti-seizure medication training. The minimum training should be equivalent to the American Heart Association's Family and Friends curriculum.
- If the school nurse (RN) or school personnel volunteer is not available or is unable to administer emergency anti-seizure medication, 911 will be called, in accordance with the Individualized Health Plan (IHP) and/or the Emergency Care Plan (ECP).
- School administrator/school nurse (RN) will conduct a monthly check of each anti-seizure medication in possession of the school and notify the parent/guardian one (1) month prior to the medication expiration date.
- The LEA will maintain CPR training and emergency anti-seizure medication training documentation in the school personnel volunteer's personnel file.
- Upon administration of emergency anti-seizure medication, the school officials will call 911.
- LEA shall not assign a student to a school other than the one to which the student is zoned or would otherwise regularly attend because the student has a seizure disorder.

School Nurse Training Responsibilities

Conduct an assessment and document the volunteer's competency in understanding seizures, the medication, method of administration and all tasks required to carry out the specific guidelines for administration of emergency anti-seizure medication.

- Determine the competency of the volunteer to administer the emergency anti-seizure medication.
- Verify that the CPR status of the volunteer is current and consistent with guidelines of the American Heart Association prior to anti-seizure emergency medication training, and place certification of training in the personnel or other appropriate school file.
- Provide volunteer school personnel training in the recognition of seizures and especially prolonged seizure activity that may require rapid administration of emergency anti-seizure medication in the school setting.

Suggested Components for Training Curriculum

- The participant(s) will demonstrate and/or verbalize the following competencies:
 - Know which authorization forms are required to be completed for students with conditions requiring the emergency administration of emergency anti-seizure medication (including diazepam rectal gel) in accordance with school district policy and requirements.
 - Have a basic understanding of seizures and the different types and characteristics of each type of seizure.
 - Develop an understanding of how to manage seizures during the school day based upon health care provider's seizure authorization, including immediate first aid for seizures and techniques for CPR.
 - Know the five rights (5 R's) of medication administration.
 - Read medication label and know how to correctly follow directions on the medication label.
 - Know what the proper storage of prescription medication.
 - Know how to appropriately administer diazepam rectal gel.
 - Know the steps to follow after administering diazepam rectal gel.
 - Know when to call EMS (911).
 - Know how to dispose of unused emergency anti-seizure medication/delivery device.
- Both a written test and a skills check should be included, and the learner must demonstrate competency on both.

Training Resources from the Epilepsy Foundation

For the School Nurse:

Managing Students with Seizures is a continuing education training program designed to provide the school nurse with information, strategies and resources that will enable him/her to better manage the student with seizures by supporting positive treatment outcomes, maximizing educational and developmental opportunities, and ensuring a safe and supportive environment. [The Managing Students with Seizures: A Training for School Nurses](#) program is divided into three modules to assist the school nurse in learning to effectively manage seizures in a school environment.

For School Personnel:

Seizure Training for School Personnel was developed in response to the need for a consistent educational tool to help promote a positive social and educational environment for students living with seizures and epilepsy. The program provides teachers and other school personnel with information needed to recognize seizures, respond with appropriate first aid, and understand the impact seizures have on students. It is for elementary, middle, and secondary school staff, including teachers, administrators, cafeteria workers, security guards, custodians, or anyone else that will come in contact with students.

The Epilepsy Foundation provides a [kit](#) with a CD-ROM which includes a facilitator's guide, PowerPoint slides, information on continuing education units, and a DVD called Seizures in Schools: Understanding and Assisting Students with Epilepsy. You can also take the training online or call 1-800-332-1000 for more information.

For pictorial instructions regarding administering Diastat, click [here](#).

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Frequently Asked Questions

Health Care in a School Setting

General Questions

1. *Is every public school system (LEA) required to provide a school nurse (registered nurse)?*

Yes. T.C.A. § **49-50-1602** requires certain health care procedures, including the administration of medications during the school day or at related events, to be performed by appropriately licensed health care professionals. With regard to public school systems, T.C.A. § **49-3-359 (c)(1)** states “There is included in the Tennessee Basic Education Program (BEP) an amount of money sufficient to fund one (1) full-time, public school nurse position for each three thousand (3,000) students or one (1) full-time position for each LEA, whichever is greater. An LEA may use such funds to directly employ a public school nurse or to contract with the Tennessee public school nurse program, created by T.C.A. § **68-1-1201 (a)**, for provision of school health services; provided, that after the BEP is fully funded, an LEA must use such funds to directly employ or contract for a public school nurse as provided for in this subsection or must advise the department of education that the LEA has affirmatively determined not to do so, in which case the LEA shall notify the department of the election against providing such service and the alternative arrangement which the LEA has made to meet the health needs of its students.”

2. *Where can I find sample Individual/Emergency Health Care Plans?*

You can find many sample health care plans on the Coordinated School Health website. Click [here](#) to access the Chronic Health Conditions Toolkit.

3. *Who supervises the Licensed Practical Nurse (LPN) in a school setting?*

The LPN works under the supervision of an RN, physician, or dentist and can perform health care procedures appropriate to the LPN’s level of education and experience.

4. *Has a job description been developed for school nurses?*

No. Job descriptions are the responsibility of local school systems. However, samples are available through the Tennessee Departments of Health and Education, the Tennessee Nurses Association, and the National Association of School Nurses.

5. *Does the implementation of T.C.A. § 49-50-1602 constitute a Coordinated School Health Program?*

No. The eight nationally recognized components of Coordinated School Health Programs are: comprehensive health education, nutrition services, physical education, health services, healthy school environment, family/community involvement, counseling/psychological/social services, and health promotion for staff. T.C.A. § **49-1-1002** establishes guidelines and standards for Coordinated School Health Programs in Tennessee that are available through the State Departments of Education and Health.

6. *Do health department employees have the authority to speak with or meet with K-12 students on school grounds in the course of a health investigation?*

Yes. The Tennessee Department of Health has the authority to conduct investigations regarding the cause and spread of disease. In cases in which a minor is located at school, the Health Department employee may call the school and conduct a brief interview by phone, visit the school and speak with the student in person, or leave a message with the school asking the student to call.

Health Care Procedure Questions

7. Does the law regarding health care procedures apply to private schools?

Yes. The procedures are performed by nurses per the Tennessee Nurse Practice Act, therefore, practicing nurses are required to follow the same procedures and laws.

8. Who is authorized to perform health care procedures in the schools?

Most health care procedures will be performed by registered nurses or licensed practical nurses. However, under certain circumstances, other appropriately licensed professionals (e.g., physical therapists) may perform health care procedures within the scope of their practice.

9. Can a parent designate school personnel to perform health care procedures on their child?

No, school personnel cannot perform health care procedures. School personnel can volunteer to be trained to administer daily insulin or to administer glucagon, narcan, diazepam, epinephrine auto-injectors, and adrenal insufficiency medications in an emergency situation based on the student's IHP and/or ECP. Once trained, they may assist the registered nurse in carrying out specific tasks that do not require independent, specialized nursing knowledge, skill, or judgment including assessment and evaluation of student health outcomes and health counseling or teaching. (Examples of appropriate tasks include assistance with vision and hearing screenings and assist with self-administration of medication.)

10. Is it permissible for a parent to come to school to perform a health care procedure?

Yes, school districts may allow a parent to come to school to perform a health care procedure on his or her child. However, a parent cannot be required to come to school to perform the child's procedure.

11. Can a child perform a self-catheterization?

Yes, but the TN should assess the child at least bi-annually to assess problems, techniques and health status. The TN should also develop an IHP for the student.

12. Can an LPN perform a tube feeding?

Yes, under a protocol established by an RN and the student's IHP.

13. Can a teacher wipe off a trach tube?

Yes, with instruction and in accordance with the student's IHP, the teacher can wipe off excessive

secretions around the trach or the student's mouth provided they wash their hands before and after.

14. Does the school need a nurse at school if there is a student with a trach tube?

Yes, a nurse should be available in the school.

15. Are schools and school systems required to make reasonable accommodations for students who require health care procedures during off site events such as field trips?

Yes, if those accommodations are needed in order to provide the student with equal opportunity for participation.

16. Does a school board have to approve a policy regarding health care procedures?

Yes, T.C.A. § 49-50-1602 specifies that health care procedures must be performed in accordance with policies and rules of local boards of education.

17. Is CPR a health care procedure?

No, but T.C.A. § 49-5-414 recommends that each public school have at least one, or preferably more, individuals trained in CPR. T.C.A. § 49-3-359 requires each school nurse employed by an LEA to maintain current CPR certification consistent with guidelines of the American Heart Association.

18. Is the handling of body fluids a health care procedure?

No, but Universal Precautions are governed by required local school board policy as mandated by the State Board of Education and OSHA Bloodborne Pathogens Regulations.

Medication Questions

19. How do you determine if a child is competent to self-administer medications?

A student is competent if he or she possesses the cognitive ability for self-administration of his/her own medications or medical procedures, regardless of physical capabilities. If the student can identify his or her medication and the reason that the medication is used, the student is competent to self-administer the authorized and/or prescribed medication with assistance. The decision should be made by appropriate health care professionals.

20. Is training required for persons assisting with self-administration of medication?

Yes. To be consistent and to assure safe care of students, it is required that all school personnel assisting with self-administration of medications have a basic training and annual updates from the registered nurse related to assistance and documentation of medications. Training records should be kept in the personnel file. It is recommended back-up personnel be trained at each school site.

In addition, training must be provided for school personnel who volunteer to administer emergency medications glucagon, diazepam, naloxone, epinephrine auto-injectors, and steroids to treat an adrenal insufficiency crisis.

21. Can a secretary administer medications?

No, but a secretary could assist a child in the self-administration of his/her medication if designated and trained, and the guidelines for self-administration are followed.

22. Can a volunteer who is a nurse assist with administration of medication or perform a health care procedure in school?

No. They are volunteers and not employed or under contract by the school system.

23. Can a nurse employed by the school system in another capacity (for example, health education teacher) perform health care procedures for students or assist students in the self-administration of medication?

No, they cannot do procedures because they would be practicing outside of their job description. These nurses could assist students with self-administration of medications if they have been properly trained as volunteer medication administrators or administer emergency medications if they have been properly trained.

24. Why do complementary and alternative medications (CAMs) require a prescriber's order when other over-the-counter medications do not?

These medications typically do not contain appropriate dosing information such as dose amount and schedule for children and youth. There are also possible unknown drug interactions and adverse effects that may occur with some CAMs.

Diabetes Questions

25. Can a child who has diabetes perform their own glucose monitoring?

Yes. If not done by the child, it must be performed by an RN or LPN or the child may perform the procedure assisted by volunteer school personnel trained according to the guidelines.

26. Who can administer glucagon in a school setting?

In the absence of the school nurse, any staff member that has volunteered and has been properly trained may administer glucagon to a specific student with diabetes. In the case of an emergency, trained personnel should only administer glucagon according to their district's developed standard protocol.

27. Who can administer insulin in a school setting?

In the absence of the school nurse, trained school personnel that volunteer and who have been properly trained may administer insulin to a specific student based on that student's Individual Health Plan (IHP). Trained personnel should only administer insulin according to the district's developed standard protocol.

28. Who conducts diabetes training?

An LEA should provide training under the direction of a school's registered nurse. Training should include prevention and management of diabetes.

Allergy and Anaphylaxis Questions

29. Can a teacher or other school personnel administer epinephrine if a child has a life-threatening allergic reaction?

Yes, if epinephrine is available, the school nurse is not immediately available, and if personnel have volunteered and been appropriately trained.

30. What is a food allergy?

An abnormal response to a food, triggered by the body's immune system. Once the immune system decides that a particular food is harmful, it creates specific antibodies against it. Allergic reaction to food may cause serious illness and in some cases death.

31. What is food intolerance?

When the body has difficulty digesting the food but the immune system is not affected. The symptoms can look and feel like a food allergy. Lactose intolerance is one example of food intolerance. A person with lactose intolerance lacks an enzyme that is needed to digest milk sugar when the person eats milk products. Symptoms such as gas, bloating, and abdominal pain may occur.

32. What is anaphylaxis?

A severe allergic reaction that is rapid in onset and may cause death. Criteria are met when two or more of the following occur rapidly after exposure to a likely allergen (minutes to hours):

- Involvement of skin-mucosal tissue
- Respiratory compromise
- Reduced BP or associated symptoms (collapse, syncope, incontinence)
- Persistent GI symptoms (cramping abdominal pain, vomiting) Anaphylaxis may be fatal, in particular if not treated promptly with epinephrine.

33. What are some of the causes of anaphylaxis?

- Foods - milk, eggs, fish, seafood, shellfish, food additives, yeast, gluten, peanuts, peanut oil, peanut products, soy, wheat, tree nuts (walnuts, cashews, pecans, hazelnuts, almonds).
- Medication - antibiotics (penicillin), seizure medication, muscle relaxants, aspirin. Latex - elastic waistbands, kitchen gloves, balloons, other household items.
- Exercise - rare Insect Stings
- However, individuals can be allergic to any food and some children may be allergic to more than one food. Some anaphylactic reactions have no known cause.

34. Who has an anaphylaxis event/reaction?

Anyone can experience an anaphylactic reaction, not just those with known allergies.

35. How can I prevent anaphylaxis?

Strict avoidance of substances and situations known to trigger severe allergic reactions in an individual. Read labels of all foods, and if a label contains unfamiliar terms, do not offer or permit consumption of

the food to a student with known allergens. However, it is challenging to avoid all allergens completely all the time, and accidental ingestions occur approximately every 3-5 years on average.

36. What is the difference between EpiPen and EpiPen Jr.?

Epi-Pen containing 0.3 mg single dose of epinephrine is prescribed for individuals weighing 66 pounds or more. EpiPen Jr. contains 0.15 mg single dose of epinephrine and is for individuals weighing between 33 and 66 pounds. Sometimes a single dose of epinephrine is not enough to reverse the symptom of anaphylaxis, so the doctor may prescribe more than one auto-injector and this practice is consistent with updated guidelines.

37. What are some of the common signs and symptoms of anaphylaxis?

These symptoms may include one or more of the following:

- Difficulty breathing
- Itching (of any body part)
- Coughing
- Difficulty swallowing
- Flushed or pale skin
- Hives
- Red, watery eyes
- Shortness of breath
- Swelling of lips, tongue, and throat
- Wheezing
- Vomiting, dizziness, faintness

38. How do I respond to anaphylaxis?

Giving epinephrine by auto-injector immediately. No matter what the cause is, whether it is food, latex, insect sting, or exercise-induced, epinephrine is the first medication that should be used in the emergency management of anaphylaxis. It is the only medication that has been proven to be lifesaving in the treatment of anaphylaxis. As a second line therapy, antihistamines should be used in conjunction with epinephrine. Antihistamines should never be used alone. If in doubt it is better to give the epinephrine and seek medical care. Fatalities occur when epinephrine is withheld.

39. Who can administer an epinephrine auto-injector in a school setting?

In the absence of the school nurse, trained school personnel that have volunteered and have been properly trained may administer epinephrine. In the case of an emergency, trained personnel should only administer epinephrine auto-injectors according to the district's developed standard protocol.

40. Who conducts the trainings for epinephrine auto-injector administration?

An LEA should provide training under the direction of a school registered nurse. Training should include prevention, recognition and management of an anaphylactic reaction.

41. How often should I be trained?

Recommended minimum of once a year for all personnel that has been trained, including nurses. It is also recommended that there be a minimum of three to five staff members trained at a school to ensure adequate provision for emergency situations, and additional staff for every 100 students.

42. Is a photo needed with a student's Allergy Action Plan?

No, but it is recommended if available, with the parents'/guardians' consent.

43. How does epinephrine work?

It is the treatment of choice for allergic emergencies because it quickly constricts blood vessels, relaxes smooth muscles in the lungs to improve breathing, stimulates the heartbeat, and works to reverse hives

and swelling around the face and lips.

44. Which foods are children commonly allergic to?

Eggs, milk, and peanuts. Some of the most common food allergies in adults are shellfish, shrimp, crayfish, lobster, crab, peanuts, fish, and tree nuts. Adults usually keep their allergies for a lifetime, but children sometimes outgrow them. However, both children and adults could be allergic to items on both lists.

45. What happens when a child goes on a field trip? Are schools and school systems required to make accommodations for field trips?

Allergy Action Plan requires that the teacher notify parents, cafeteria staff and school nurse in advance of upcoming trips, providing time to plan for meals and snacks. The child should be assigned to an adult who is trained in epinephrine auto-injector administration. An adult should remain with the child at all times during transport and throughout the trip. A parent can volunteer to chaperone but their attendance should never be required (unless the attendance of all parents is required). A copy of the child's Allergy Action Plan goes with the child along with all emergency information and contact numbers.

Seizure Questions

46. Can anyone have epilepsy?

Virtually everyone can have a seizure under the right circumstances. Each of us has a brain seizure threshold which makes us more or less resistant to seizures. Seizures can have many causes, including brain injury, poisoning, head trauma, genetic disorders, or stroke; and these factors are not restricted to any age group, sex, or race, and neither is epilepsy.

47. Do seizures cause brain damage?

Single brief seizures do not cause brain damage. Although generalized tonic-clonic (grand mal) seizures lasting longer than 30 minutes may injure the brain, there is no evidence that shorter seizures, lasting less than 30 minutes, cause permanent injury to the brain.

48. Can fevers cause seizures in children?

In children under the age of 5 years, fevers may cause a generalized seizure, causing great alarm. These are called febrile seizures and usually involve convulsions of the entire body (generalized tonic-clonic activity) and last less than 15 minutes, but they may also involve one side of the body and have a longer duration. Febrile seizures may run in families.

49. Who should be trained to administer diazepam in a life-threatening situation?

In the absence of the school nurse, school personnel that volunteer and has been properly trained may administer diazepam. In the case of an emergency, trained personnel should only administer diazepam according to the district's developed standard protocol.

50. Who conducts the emergency medication training for seizures?

An LEA should provide training under the direction of a school registered nurse. Training should include prevention of known triggers, seizure management and seizure first aid.

Adrenal Insufficiency Questions

51. Is my district required to have policies and procedures regarding administration of medication for adrenal insufficiency/crisis?

Yes, T.C.A. § 49-5-414 states that each district must adopt policies and procedures that provide for the administration of medications that treat adrenal insufficiency.

52. Is my district required to train staff to administer medication for the treatment of adrenal crisis?

Yes, if the district has been informed by a parent or guardian that a student in the district has adrenal insufficiency.

53. If no one is available to administer the emergency medication to a known adrenal insufficiency student believed to be in crisis, do I call 911 as alternate care?

While you should call (or instruct someone else to call) 911 when there is a student believed to be experiencing an adrenal crisis, there should ALWAYS be a staff member available that has been trained to administer the medication when needed.

54. What is adrenal insufficiency?

Adrenal insufficiency is an endocrine, or hormonal, disorder that occurs when the adrenal glands do not produce enough of certain hormones. The adrenal glands are located just above the kidneys.

55. What is adrenal crisis?

Adrenal crisis is a medical state marked by severe pain, low blood pressure and loss of consciousness that if left untreated can lead to death.

Definitions

Accountability: As used in this document, being responsible and answerable for actions or inactions of self or others.

Advanced Practice Registered Nurse (APRN): A registered nurse who holds a master's degree or higher in nursing specialty and national certification as a Nurse Practitioner, Nurse Anesthetist, Nurse Midwife, or Clinical Nurse Specialist. An Advanced Practice Registered Nurse who holds a certificate of fitness to prescribe may diagnose and prescribe treatments, diagnostics, and medications. An APRN who prescribes is required to have a collaborating physician pursuant to T.C.A. § 63-7-123.

Ancillary Personnel: Ancillary personnel must complete appropriate training provided by appropriate health care professionals (RN, MD, DO, dentist) and must have continued supervision by appropriately licensed health care professionals (RN, MD, DO, dentist).

Allergen: A food or other substance that triggers an allergic reaction in individuals who are sensitive to it. Allergens can cause allergic reactions when they are swallowed, touched, or even inhaled. Sometimes even a tiny trace of an allergen such as a dusting of a peanut on a cake can trigger anaphylaxis.

Allergic Reaction: An immune-mediated response to an otherwise harmless substance.

Allergist/Immunologist: A physician trained in the science of immunology.

Allergy Action Plan: A written emergency care plan for students who have a life-threatening food allergy. An Allergy Action Plan provides specific directions about what to do in a medical emergency such as an accidental exposure to the allergen. The Emergency Care Plan is developed based on the IHP (Individual Health Care Plan).

Anaphylaxis: A severe allergic reaction that is rapid in onset and may cause death if not treated quickly with epinephrine.

Antihistamine: A medication used to block the effects of histamine, a chemical that is released during an allergic reaction. Antihistamines are available by prescription and over the counter.

Assisted Administration: Assisting a student in the self-ingestion, application, injection, or inhalation of medication according to directions of the legal prescriber, or monitoring the self-administration of medication.

Authorized Medication: Prescription or non-prescription drugs for which the parent or guardian has submitted a written request for administration.

Blood Glucose Monitoring: Blood glucose is essential for the body to function. Blood sugar testing may be ordered to check the blood sugar level. Low blood glucose can become life-threatening and needs appropriate treatment.

CAM: Complementary and alternative medicine. Examples may include herbal and dietary supplements.

Catheterization (Urinary): A flexible, thin tube is inserted into the bladder in order to drain the urine in situations where bladder control is impaired.

Celiac Disease (Gluten Intolerance): A genetic disorder characterized by an inappropriate immune response to dietary proteins found in wheat, rye, and barley. This response leads to inflammation in the intestines and the resulting damage to the intestinal walls which decreases their ability to absorb nutrients. The body begins to develop symptoms of malnutrition and osteoporosis as a common consequence. The only treatment is lifelong adherence to a gluten-free diet. Symptoms include abdominal pain, bleeding tendencies, bone and joint pain, diarrhea, oral ulcerations, fatty stools with a foul odor, fatigue, and growth and developmental delays.

Certified Nursing Assistant (CNA): CNAs are not licensed health care professionals. Although they may assist students in some areas, they do not satisfy legal requirements for licensed health care professionals.

Competent: A student who possesses the cognitive ability for self-administration of his/her own medications or medical procedures, regardless of physical capabilities.

Diabetes Medical Management Plan (DMMP): Completed by the student's parents/guardian and personal health care team and can be used as the basis for developing education plans and nursing care plans for students with diabetes. The Diabetes Medical Management Plan should be included in the student's IHP.

Delegation: (Nursing): The transfer to a competent individual of the authority to perform a selected nursing activity in a selected situation, with the nurse retaining accountability for the delegation. Nursing delegation is governed by the nurse practice act and rules and regulations of the state board of nursing.

Emergency: A serious situation that arises suddenly and threatens the life, limb, or welfare of one or more persons; a crisis. An emergency creates a type of implied consent when the individual is unable to consent to treatment that is immediately necessary.

Emergency Plan (Emergency Care Plan or Emergency Action Plan): Plan developed based on the IHP, and is written in clear action steps and provided to the school staff to assist them in responding to a health crisis.

Epinephrine (Adrenaline): The drug of choice in the emergency treatment of acute anaphylaxis. Action: It relaxes bronchial smooth muscle by stimulating alpha and beta receptors in the sympathetic nervous system. It must be administered as soon as anaphylaxis is suspected. For this reason, an allergic patient often carries their own epinephrine auto-injectors.

Epinephrine Auto-Injector: A prescription device pre-filled with a medication called epinephrine to treat life-threatening allergic reactions.

Food Intolerance: When the body has difficulty digesting food and the immune system is not affected. Signs and symptoms may occur within minutes or hours after eating the food and includes headaches, abdominal pain, also a rash. Unlike the case of food allergies where only a tiny amount of the food is needed to trigger a reaction, with intolerance the person may be able to eat small quantities of the food without any problems, (e.g., lactose intolerance with milk).

Gastrointestinal (GI) Tract: The system of the body that includes the stomach and intestines.

Gastrostomy: A surgical opening through the surface of the abdomen into the stomach. A flexible tube (G-tube) or “T” shaped device (G-button) is inserted into the surgical opening to provide nutrition, hydration, or medication. This method is used to bypass the usual route of feeding by mouth when there is an obstruction in the esophagus and swallowing is impaired, and/or the student is at risk for choking or is unable to take in enough food by mouth to obtain adequate nutrition.

Glucagon: A polypeptide hormone identical to human glucagon that increases blood glucose by stimulating the liver to release glucose and amino acid (alanine) from the muscles. Glucagon can be administered by injection in the case of a person with diabetes having a hypoglycemic emergency.

Health Assessment: The systematic collection and analysis of information or data about an individual’s health situation to determine the individual’s general state of health, patterns of functioning, and the need for health services, counseling, and education; a licensed function of physicians and nurses. Health assessments of students by school nurses include data collection, data analysis, and the identification of relevant nursing diagnoses in order to plan interventions and accommodations, make appropriate referrals and collaborate with others (e.g., with families, educators, and health care providers) to promote students’ health and learning).

Health Care Procedure: Related to T.C.A. § 49-6-1602, defined as any clinical activity or task performed by competent licensed health *care professionals within the scope of practice for the profession*.

Health Care Professional: An individual with specialized educational preparation, knowledge, and skill who is licensed under state statute to provide specific health care services to clients (e.g., nurse, physician, occupational and physical therapist, speech-language pathologist, clinical psychologist, and social worker).

Health Care Provider: A doctor of medicine or osteopathy, podiatrist, dentist, chiropractor, clinical psychologist, optometrist, nurse practitioner, nurse-midwife, or a clinical social worker who is authorized to practice by the State and performing within the scope of their practice as defined by State law.

IEP: An Individualized Education Program is a written statement developed and implemented through a collaborative process for a child with a disability, as defined by the Individuals with Disabilities Education Act.

Immune System: A complex network of specialized cell tissues and organs that defend the body against attacks by disease-causing microbes.

Individual Health Plan (IHP): A health care plan developed by a registered nurse for children with acute or chronic health issues. Parents and other health care providers involved with the child participate in the development/approval of the plan. The IHP should be developed using the 5 sequential steps of the nursing process: assessment, diagnosis, plan, implement, evaluate.

Invasive: Requiring the entry of a needle, catheter, or other instrument into a part of the body, especially in a diagnostic procedure, like a biopsy.

Lactose Intolerance: A reaction to milk that does not involve the immune system. Lactose intolerant people lack an enzyme that is needed to digest milk sugar. When milk products are eaten, symptoms such as gas, bloating, and abdominal pain may occur. Lactose intolerance is more common in adults than in young children.

Ketogenic Diet: The ketogenic diet is a special high-fat, low-carbohydrate diet that helps to control seizures in some people with epilepsy. It is prescribed by a physician and carefully monitored by a dietitian.

LEA: Local educational agency, which includes county, city, and special school districts and the state special schools and achievement schools.

Licensure: Permission by a competent government agency. In Tennessee, the agency is a Health Related Board, such as the Board of Nursing.

Licensed Practical Nurse (LPN): A nurse trained in basic nursing techniques and direct patient care who assists and practices under the direction or supervision of the registered nurse per the "Tennessee Nurse Practice Act." The educational background of an LPN is generally one year of training in a hospital-based program or technology center program. An LPN works under the direction of an RN in providing health services in the school. The LPN must receive periodic, on-site supervision by an appropriately licensed health care provider (RN, MD, DO, and dentist).

Licensed Prescriber: As used in this document, refers to physicians, a medical doctor (M.D.) and doctor of osteopathy (D.O.), dentists, podiatrists, physician assistants and advanced practice nurses legally authorized to prescribe medications.

Licensed Prescriber's Orders (for school use): Statements written by a student's licensed health care provider which direct the medical care at school. The orders are valid for one school year unless changed or time limited by the prescriber. The order gives school systems permission to carry out a procedure in the school setting.

Long-term Medication: Medication utilized for the treatment of chronic illness and includes both daily and PRN (as needed) medication.

LTA: Life-Threatening Allergy.

MAR: Medication Administration Record.

Medical Management Plan: Completed by the student's parents/guardian and personal health care team and can be used as the basis for developing education plans and nursing care plans for students with conditions such as diabetes, asthma, allergies, seizures, etc. The Medical Management Plan should be included in the student's IHP.

Medication: Any substance that when taken into a living organism, may modify one or more of its functions; any medicine or preparation for internal or external use of humans, intended to be used for the cure, mitigation, or prevention of diseases or abnormalities of humans.

Non-prescription Medication: Medications which may be obtained over the counter without a prescription from a licensed healthcare provider.

Nurse Practice Act: A statute enacted by the legislature of a state and the Administrative Rules and Regulations that delineates the legal scope of the practice of nursing within the geographical boundaries of the jurisdiction.

Nursing Assessment: This is the first step in the nursing process where important subjective and objective information is collected, organized, analyzed, and measured against usual outcomes.

Occupational Therapist: A person licensed by the state of Tennessee to practice occupational therapy. [T.C.A. § 63-13-103(9)]

Parental Consent: Written consent from a parent/guardian that is required before a student can be administered medication or be a recipient of health care procedure in the school setting, outside of emergency situations.

Physical Therapist: A person licensed in the state of Tennessee to practice physical therapy. [T.C.A. § 63-13-103(14)]

Prescription Medications: Medications requiring a written order for dispensing, signed by a licensed prescriber.

Protocol: A written outline of direction relative to standards of practice for a health condition or health care procedure.

Qualified: Ability to competently demonstrate the use of equipment and performance of procedures necessary to provide health care services that are specialized. The level of competence for a registered nurse is established by professional standards of nursing practice and agency guidelines.

Registered Nurse (RN): A nurse licensed to practice in Tennessee who has successfully passed the national licensure examination for registered nurses after completing a Board of Nursing approved program leading to an associate, bachelor, or master's degree in nursing or a 3-year diploma hospital-based program. The RN is the primary professional who will coordinate health services in the school setting.

School Nurse: A professionally educated registered nurse whose role it is to strengthen and facilitate the educational process by improving and protecting the health status of the students.

Scope of Practice: The legal boundaries of a profession as set out in Tennessee Code Annotated and rules promulgated by the regulatory boards.

Self-Administration: The ingestion, application, injection, or inhalation of his/her own medication by a student in school OR in the case of a physically challenged student, student directed administration by a designated individual.

Standards of Care: A recognized standard of professional health care practice in a community.

Standardized Procedures: The minimum safe standards of practice utilized in basic and specialized health care procedures.

Student's School Records: A compilation of health, attendance, disciplinary and scholarship information that accompanies the student through his/her school career. It should also contain the student's birth certificate and a copy of the guardian's driver's license for proper identification. Some student school records may

contain parental custody documentation. All student records shall be remitted in accordance with the Family Education Rights and Privacy Act.

Tracheostomy: A surgical opening into the trachea (windpipe) in the neck to allow the passage of air into the lungs.

Universal Precautions: General barrier techniques designed to reduce exposure of personnel to body fluids containing the human immunodeficiency virus or other blood-borne pathogens. Schools systems must provide annual training to all staff members.

Unlicensed Assistive Personnel (UAP): A school volunteer who is trained to function in an assistive role to the registered nurse in the provision of student-related activities or responsibilities. This person is not licensed or governed by a Health Regulatory Board. Unlicensed assistive personnel may only assist students in the self-administration of medications or standby to assist students to do their health care procedure based on the assessment and direction of the registered nurse.

Additional Resources¹

School Health:

[Centers for Disease Control and Prevention: Healthy School Index](#)

[American Academy of Pediatrics: Role of the School Nurse in Providing School Health Services](#)

[National Association of School Nurses: Home Page](#)

[Tennessee Nurses Association: Home Page](#)

[Tennessee Association of School Nurses: Home Page](#)

Health Care Procedures:

[WISHeS Project Resources](#)

Asthma:

[American Lung Association: Asthma](#)

[Centers for Disease Control and Prevention: Asthma Resource](#)

[Asthma and Allergy Foundation of America: Asthma in Schools](#)

[American Lung Association: Asthma Policy for Schools](#)

Diabetes:

[Centers for Disease Control and Prevention: Diabetes in Schools](#)

[Centers for Disease Control and Prevention: National Diabetes Statistics Report, 2017](#)

[American Diabetes Association: Diabetes Care Tasks at School: What Key Personnel Need to Know](#)

[American Diabetes Association: Safe at School Campaign](#)

[National Institute of Diabetes and Digestive and Kidney Diseases: National Diabetes Education Program](#)

[American Academy of Pediatrics: Study of Teens and Prediabetes or Diabetes](#)

¹ Reference to any resource, organization, activity, product, or service does not constitute or imply endorsement by the Tennessee Department of Education.

[National Association of School Nurses](#)

[American Diabetes Association: Diabetes Medical Management Plan](#)

[Centers for Disease Control and Prevention: Managing Diabetes at School](#)

[American Diabetes Association: Standardized Testing and Diabetes](#)

[American Diabetes Association: Medical and Scientific Sources of Authority \(Position Statements\)](#)

Food Allergy:

[Allergy Ready: Make sure your school is allergy ready](#)

[American Academy of Allergy Asthma & Immunology](#)

[Centers for Disease Control and Prevention: Food Allergies in Schools](#)

[Food Allergy Research & Education \(FARE\): Gold Standard for Food Allergy Management in Schools](#)

[Food Allergy Research & Education \(FARE\): Emergency Care Plan Template](#)

[Food Allergy Research & Education \(FARE\): Life With Food Allergies](#)

[Food Allergy Research & Education \(FARE\)](#)

[National Institute of Allergy and Infectious Diseases: Guidelines for Clinicians and Patients for Diagnosis and Management of Food Allergy in the United States](#)

[American Academy of Allergy Asthma & Immunology: Food Allergy Overview](#)

[Food Allergy Research & Education \(FARE\): CDC Tool Kit for Managing Food Allergies in Schools](#)

[National Association of School Nurses: Allergies and Anaphylaxis](#)

[Higher Logic: Sample School District Policies and Protocols for Epinephrine](#)

[National Association of School Nurses: Get Trained – Epinephrine Administration](#)

[Allergy Home: Bringing food Allergy Management and Awareness to Your Community: Samples and Resources](#)

Seizure:

[Centers for Disease Control and Prevention: Epilepsy in Schools](#)

[Epilepsy Foundation](#)

[Virginia Department of Education: Guidelines for Seizure Management 2010](#)

[Sample Seizure Action Plan for School](#)

[Epilepsy Foundation: Seizure Training for School Personnel](#)

[Centers for Disease Control and Prevention: Training for Professionals](#)